Inaugural Address
ON
MEDICAL GEOGRAPHY AS AN AID TO CLINICAL MEDICINE.[1]

Delivered at the First Meeting of the Isle of Man Medical Society on Dec. 4th, 1896,

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MR. PRESIDENT AND GENTLEMEN,—I thank you very cordially for the honour you have done me in asking me to deliver the inaugural address on the occasion of the first meeting of the Isle of Man Medical Society. At the same time allow me to congratulate the founders of an institution which in the sequel is calculated to promote the advancement of science among those practising in your island.

The subject I have selected for my address is one that requires no apology on my part for its introduction, as ever since I first landed in the Isle of Man, in August, 1882, I have been identified in the minds of at least your senior members with the study of geography—a study that I have persistently pursued more or less throughout my professional career, and which since 1868 has assumed the more definite form of the medical geography of Great Britain. With these few remarks I will now trace the course of my studies in the Isle of Man back to their origin in the greater island of Britain, which I was on the point of calling the mother-country—a term of endearment, however, not warranted by the Keltic origin of Manxmen. In 1875 I first published my folio work on "The Geographical Distribution of Heart Disease and Dropsy, Cancer in Females, and Phthisis in Females," illustrated by the coloured maps I here show, which I will presently briefly explain. In these maps you will observe that the Isle of Man is left uncoloured—blank, in fact. Now, it so happened that in 1882 I visited Brighton and made a thorough investigation of its physical configuration and geology, the results of which I embodied in a large map published by Bacon and Co. When Brighton was drained the engineer fortunately was an accomplished geologist and made coloured drawings of the sections cut for the sewers; these were placed at my disposal by the mayor and corporation of the borough. With these materials I was enabled to construct the map before you, which, I am pleased to know, the sanitary authority and others still find useful. Some years previously (1875) I had read a paper at Brighton showing the distribution of deaths among children from tuberculous deposits in the membranes of the brain and the mesenteric glands, and pointed out the high mortality from these causes that characterised the coastal districts of England and Wales. My geological map of Brighton, which included a portion of Hove, dispelled the illusion that this town was "all chalk, all chalk," as it had been described by some London medical men who were in the habit of sending their patients there with the view of counteracting the evils arising from London clay. From Brighton I proceeded to Scarborough, when I completed my investigations with regard to the low death-rate from phthisis there, to which I shall again refer when speaking of that disease in your island. Whilst, however, I was staying at the Yorkshire health resort my attention was again drawn to the blank area in my map lying in the Irish Sea, midway, as Cæsar described it, between Britain and Ireland, and nearly through the centre of which passed the same line of north latitude, 54° 5', that traversed Oliver's Mount, which rises over 500 ft. above the sea in the centre of Scarborough. Having determined to extend my inquiry to the Isle of Man I wrote to the then Registrar-General, Mr. Samuel Harris, now the Vicar-General, who immediately forwarded to me copies of his two first-printed annual reports for the years 1880 and 1881, being his fourth and fifth respectively; his former reports for the years 1877, 1878, and 1879 had not been printed and published and are still in MS. Since the year 1880 up to the present sixteen printed annual reports have been published, and presently I shall endeavour to lay before you some of the facts accumulated during the decennial period 1881-90, and compare them with those published by Dr. John Tatham in August last in his admirable supplement to the fifty-fifth annual report of the Registrar-General of births, deaths, and marriages in England, which embraces the same period.

The scanty materials afforded by the two printed annual reports of the Manx Registrar-General were to a certain extent disappointing, but I was not disheartened, and having just concluded an eight years' campaign against disease in the midland counties, over an area of more than a thousand square miles, containing nearly four hundred parishes (365), I lost no time in commencing my investigations on the same lines that I had laid down for my guidance whilst carrying out the larger work. The first thing to be done was to gain an accurate knowledge of the physical configuration and geology of the Isle of Man. These ends I attained, as well as I could, by walking all over the island and sketching its mountains, its valleys, its cliffs—in fact, everything that would give me a clue to solving the problems of its local climates and their relation to health and disease. This part of my work would take up too much wall space to exhibit here, but a few of my sketches that I once reduced and which were engraved for publication, now abandoned, are on the table, and may help to show you the nature of this part of the investigation. The study of the geology of the island went side by side with that of its physical geography, and as the mildness of the Manx winter enabled me to pursue my studies almost uninterruptedly I soon acquired a sufficient knowledge of every part of this beautiful rock in the Irish sea called *Mona* by Cæsar, and *Man* by us, from the old Keltic word *Maen* a rock. My next step was to make special inquiry as to the prevalence or otherwise of certain causes of death in the different parishes, carrying out a thorough house-to-house visitation, for which I had provided myself with lists of the names of those who had died from any one of the specified diseases. In this way I made use of what I have characterised as "scanty" data, but their teaching when studied with their surroundings proved in the sequel to be of great service, and I have long since ceased to regret the extra labour that they cost me.

It was during this house-to-house visitation that I learned the true state of old Douglas, and was enabled to advise those in authority against enwalling it, as was once proposed, but to air-flush it by means of new wide streets and the destruction of the old and narrow ones—which piece of advice I have remained here long enough to see carried out to a salutary extent. You still want baths and wash-houses, and the clothes dried before being taken home to the artizans' and labourers' dwellings.

Before entering upon the description of the maps of disease-distribution in the Isle of Man I must very briefly explain the maps that I had previously constructed to illustrate the medical geography of heart disease and phthisis and cancer in England and Wales; the heart disease map was first published in 1871, then again in 1875, with those of the two other diseases. In 1892 I published, as an introduction to the Medical Geography of Great Britain,[2] the first part of the second edition of that work, and illustrated my method of investigation by maps of the Geology, Physical Geography, and Disease Distribution in the English Lake District, so that I need not now enter further into detail than will be sufficient to enable you to read my English maps and compare them with those I have constructed for your country. Moreover, only so lately as last May Professor Thomas Clifford Allbutt published in his "System of Medicine"[3] an article on the "Medical Geography of Great Britain," which he had asked me to contribute to his great standard work. In this contribution I endeavoured as succinctly as possible to explain the principles of this important branch of knowledge and their application to clinical medicine. To these works, therefore, I must refer the members of this society who desire to become further acquainted with the history and results of my investigations.

On the three maps of England and Wales before you are portrayed, by means of different shades of red and blue colours, the distribution of three great causes of death—heart-disease among males and females, phthisis among females, and cancer among females—

[1] Mr. Haviland's address was freely illustrated by coloured maps and diagrams.

[2] Swan Sonnenschein and Co., London, 1892.

[3] London: Macmillan and Co., Ltd. 1896. Vol. i., pp. 43 54.

during the decennial period 1851-60, the data for which were derived from Dr. William Farr's first supplement to the Registrar-General's twenty-fifth annual report. The scale of colours is the same in all the maps, whilst the death-rates, of course, differ according to the cause of death represented. I selected red and blue with the view of aiding the medical memory, the first being typical of red, life-giving arterial blood, the symbol of health and low mortality as indicated by death-rates below the average, whilst the second represents the colour of effete and used-up venous blood, the emblem of disease and high death-rates, or a mortality above the average. The lowest mortality is indicated by the darkest red and the highest by the darkest blue, the intermediate shades between these polar extremes gradually decreasing in intensity as they approach the central average point, which in the case of heart disease (for both sexes) was during 1851-60 equal to an annual death-rate of 12·45 to every 10,000 living, in that of cancer of 4·33, and of phthisis of 27·74 to every 10,000 females living. The number of deaths from heart disease during the above ten years amounted to 236,973, from cancer 42,137, and phthisis

Outline Map of the Registration Districts of the Isle of Man. Scale, six miles to the inch.

269,618 amongst a mean population in the first instance of 18,996,616, and among the two latter of 9,718,174 females.

With this brief preliminary explanation I will now endeavour to show you what the three maps teach us, and then proceed to compare the lessons derived from them with those afforded by maps of the Isle of Man, representing the distribution of deaths from different causes over an equal number of years, although not for the same decennium. The English maps are divided into 630 registration districts.

[Mr. Haviland here described the three maps of England and Wales, relating to A, Heart Disease in both Sexes; B, Phthisis in Females; and C, Cancer in Females. In Map A mortality was least in wind-swept districts where the valleys lay in the axes of the prevailing winds. In Map B the opposite state of things prevailed, and as regards Map C Mr. Haviland continued:—]

The cancer map.—I now proceed to explain the groups of high and low mortality among females from cancer. The causes regulating the distribution of death from malignant diseases will be seen to differ widely from those with which we have hitherto dealt. It is true that on comparing this map with that of phthisis, the two when placed side by side present a marked contrast to one another; but this is more due to the fact that cancer affects the river-valley systems, which when protected and sheltered harbour the *materies morbi* of rheumatism, and its too frequent sequel heart disease, than to a common cause. A few illustrations, however, will suffice to show the nature of the problems that this remarkable contrast affords us. I will follow the plan I have hitherto adopted and begin with the high mortality groups; these will be seen to skirt the lower courses of fully-formed rivers that seasonally flood their riparial districts, instances of which will be seen, especially on the east and south coasts, from the Tweed to the Devonshire rivers, between which extremes will stand out the blue colouring of high mortality along the Rivers Tyne, Swale, Humber, Welland, Trent, Ouse, Yare, the East Anglian rivers, Thames, and the south coast rivers. The Thames Basin has long been known as one of the great cancer fields of England and Wales, and I may say, in passing, that with the fresh light thrown on this subject by the increased numbers afforded by the deaths occurring during 1881-90 the mortality tends to show an increase instead of a decrease. This highly important area has been treated separately and the history of cancer within it will be shortly published. It is natural to suppose that if floods tend to increase the mortality from malignant diseases in the districts where they occur, the localities where floods do not and cannot occur should be comparatively free from these diseases; or that if the low-lying clays and retentive soils which characterise the high-mortality flooded areas are replaced by elevated permeable formation, such as the several limestones, then, too, the death-rates would lessen and the groups would be characterised by shades of red, such as can be seen throughout the palæozoic and elevated areas of Wales, the north-west of England, the chalk downs on the north and south of the Thames Basin—in fact, wherever chalk and other limestones come to the surface. Having given you a hasty sketch of the teachings of these three maps I will now pass on to the geographical distribution of the same causes of death in the Isle of Man during the ten years 1881-1890. The groups of high and low mortality are represented by the same scale of colours, but the scale of mortality will be adjusted according to the insular averages.

The Isle of Man is divided into twenty-one districts, seventeen parishes, and four townships for registration purposes (see Map). These are classed together into four divisions, consisting of the Western—Peel, German, Patrick, Michael, and Ballaugh; the Northern—Ramsey, Maughold, Lezayre, Andreas, Bride, and Jurby; the Eastern—Douglas, Onchan, Lonan, Braddan, and Marown; and the Southern—Castletown, Malew, Santon, Arbory, and Rushen. The Act of Tynwald, by which the registration of births, deaths, and marriages became law, was promulgated on July 5th, 1878, so that it was in force for a year and a half before the Registrar-General's report for 1880 was printed. In 1881 the next census after that year took place, and in 1891 the ten years were again completed by the census of that year, and thus enabled the mean populations of the several districts to be taken for the ten years 1881-90 by adding the two censuses together and dividing by two, as in the cases of the English and Scotch censuses. Although I have worked out in a tabular form all the details of the twenty-one districts for each of the single years composing the decennium 1881-90, as regards their mean populations, numbers of deaths from each of the three causes for each year, and the annual death-rates from them, I shall content myself on this occasion with only

laying before you a summary of the results of my investigation, reserving for your future reference the tables containing the actual figures, as they will be of more use in the study than in the lecture room. Ever since the first publication of my English maps, the first thing that appears to strike the student is the fact that the truthful delineation of the distribution of a cause of death, carefully worked out by death-rates from it, should give a clue to the physical geography and geology of a country. That such, however, is the case no one, I think, will now deny who has attentively followed the explanations I have given of the groups of high and low mortality from the three classes of disease that have just been discussed. England and Wales offer every variety of physical and geological feature, from the elevated mountain masses of the Cambrian and Lake District, the Snowdon, and great water parting of Wales, and the Derbyshire and Devonshire peaks and moors in the west, to the rich central valleys of the Severn, the Thames, and the broad stretches of flat, alluvial lands in the east; and when we consider that this diversity of land surface is spread over an area of nearly 60,000 square miles (58 186), we may well hesitate to accept the teachings of a little outlying island only 227 square miles in extent with those of a country more than 256 times as large. "*De minimis non curat lex.*" But science does, fortunately, and, moreover, science from day to day accumulates the facts on which it is built, and, like a rolling snow-mass, *vires acquirit eundo*, so we will make a beginning with the first few possible facts that have come to our hand since your Registration of Deaths Act was first promulgated from your ancient Norse Tynwald Hill on July 5th, 1873. Let us, then, begin with a brief enumeration of the main facts at our disposal. The area of England and Wales, I will remind you, is equal to 58 186 square miles, and is divided into 631 registration districts, giving an average area to each of 92 square miles, whilst that of the Isle of Man is 227 square miles, divided amongst 21 districts, giving an average of a little over 12 square miles each. The four town districts are the smallest but most populous, as in England, and it will be seen by the map before you showing the elevated land that large areas of several of the rural districts in the north-east and south-west of the island are occupied by sparsely-inhabited mountain lands. These culminate in the north at Snaefell, 2034 feet, and in the south at Barrule at 1585 feet. Running, as these masses do continuously from the north-east in the Maughold district to the south-west in that of Rushen, they form the backbone of the island, and roughly separate the north-west from the south-east aspects.

Heart disease.—The number of deaths registered as caused by diseases of the circulatory organs amounted "at all ages" to 402 males and 499 females during the decennium 1881–1890 in the Isle of Man amongst a mean population of 26 044 males and 28,538 females, equal to an annual death-rate of 15·43 among males to every 10 000 males living, and of 17·48 among females. During the same period the death-rates in England and Wales were 15·47 and 16 02 respectively, so that the death-rates are very similar to those of the island, being only 0·04 less among males and 1·46 more among females. On looking at a map of the Isle of Man there will be little difficulty in pointing to the districts that are liable to the full force of the prevailing winds which we have seen in England to have such a powerful effect in reducing the mortality from diseases of the circulatory organs. The axis of the island corresponds with the line of the south-west and north-east prevailing winds The southern division embraces the wind-swept parishes of Rushen, Arbory, and Malew, the death-rate amounting to only 7 19 males and 11·34 females to every 10,000; whilst the more sheltered parishes, as Michael, under the lee of the precipitous cliffs, have a much higher death-rate, 17·64 males and 18 41 females; Marown, 22 82 females. Among males, however, the death-rate is low, 8 11. I have omitted the results from the towns and from Braddan, as they contain the lunatic asylum and the poor-house, the deaths in which have not been accounted for. Santon, too, contains the isolation hospital, in which several deaths have taken place. Corrections for deaths in these institutions should in future be made.

Phthisis.—In the ten years from this cause there were 722 deaths among males and 815 among females, equal to a death-rate of 27·72 among the former and 28 55 among the latter. In the first map that I constructed for 1880–1882 the distribution of phthisis among females in this island was faithfully foreshadowed, and will help us to understand the figures of the ten years 1880-91: Bride, 46 51; and Ballaugh, 32·25, in the north; and Rushen, 31·10, and Arbory, 37 69, in the south. On the west coast, under the shelter of the Kirkmichael cliffs, there was a low mortality (20·25), as was found under the protection of the Scarborough and the North Devon cliffs. In fact, as I pointed out in Edinburgh when I lectured before the Scottish Meteorological Society on the Climate and Diseases in the Isle of Man as Influenced by Physical Configuration, although in some of the wind-swept parishes a very high death-rate from phthisis occurs, there are to be found in the centres of the mountain masses ample valley room for the erection of cottages where protection would be afforded, not only to the inhabitants of the island, but to the lung-tainted visitor, who would find the purest elevated climate conceivable and protection from wind. At that meeting I proposed, instead of building hospitals for phthisical patients, that cottages so constructed should be built as to turn round on a table and be adjusted so as to meet the varying sun and wind changes.

Cancer.—130 males and 195 females died from this cause during 1880-91, thus yielding an annual death-rate equal to 4 99 and 6·83 respectively. During the same period the death-rate in England and Wales reached 4 30 males and 7 38 females. In England phthisis had decreased greatly since 1851–60, when it amounted to 27·74 amongst females; in 1881-90 among that sex it had fallen to 16 08. In the Isle of Man there are no extensive river basins subject to floods, but there is elevated ground and a central valley which receives the drainage of the northern and southern masses. This valley stretches between Douglas and Peel and traverses the central parish of Marown. Its area is nearly always water-logged, and this condition of the soil I have always associated with the prevalence of cancer. Coincident with the Marown swamp is the highest death-rate from cancer among females—namely, 16·59; the next highest is found in Andreas (8 51), in Michael (7 36), and in Arbory (8·56), all more or less subject to water-logged soil. The elevated localities, such as Maughold (1·95), Lonan (5·89), and some others, as Malew, characterised by a large area of limestone (5·23), Santon (3·71), and Patrick (2·54) have all the lowest death-rates from malignant disease.

I have now given you a hasty sketch of the distribution of certain important causes of death in the Isle of Man during the ten years 1881–90, the details of which are to be found for every parish. This essay must be considered as a starting point only. This is the first attempt that has ever been made to apply the principles of medical geography to your island excepting the one that I published in 1883 on the distribution of phthisis in it. I must now leave this subject in the hands of the members of this society, who, I hope, will pursue it year after year as the disease facts accumulate. And in expressing this hope I will, in conclusion, add a word of encouragement: In the study of medical geography the busy medical practitioner will often find the material for answering such important questions as "where shall I go to avoid the chances of falling a victim to the disease with which I am tainted?" With such evidence before you as the maps present no medical man would recommend a patient to take up his abode where he knows the local climate is favourable to the diseases for which he is consulted. Fortunately for those visiting the Isle of Man, the local climates are so pronounced and varied, owing to the great diversity in its physical configuration, that when once mastered and the distribution of disease well studied, no difficulty will be experienced in answering such questions. Again, during convalescence—a period in our patients' cases of great anxiety to us, as it is one of great susceptibility to morbid influences—medical geography will often point out to us the places to be avoided when the time for a change of air arrives, as well as where are to be found the most suitable local climates.

A DANGEROUS ATTACK BY A LUNATIC.—We regret to learn that on July 17th, whilst on the cricket field, Dr. Merson, medical superintendent of the Hull Borough Asylum, received a violent blow on the back of the head from one of the patients, the blow being struck with a cricket bat. Dr. Merson was rendered unconscious immediately and remained so for several hours. His condition caused great anxiety for some days, but we are pleased to learn that he is now progressing favourably, though slowly.

A CONTRIBUTION TO THE ETIOLOGY OF BERI-BERI.[1]

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THAT the symptoms and signs of beri-beri are due to a multiple peripheral neuritis is, I think, now an accepted fact. The question which remains at issue, if, indeed, it has not yet been settled, is, What is the cause of this neuritis? A multiple neuritis is symmetrical, and, being so, the parenchymatous degeneration of the affected nerves must be due to some irritant circulating in the blood, this irritant having a special affinity for the nerve protoplasm. The peripheral parts of the nerves are the parts most affected, because, these being farthest from their source of nourishment, their vitality will be proportionately less, and they will therefore the more readily undergo degeneration.[2] We are familiar with many examples of multiple neuritis caused by poisons circulating in the blood. Alcoholic neuritis, arsenical neuritis, the neuritis of small-pox, of enteric fever, and certain aspects of diphtheritic paralysis, may all be cited by way of illustration. In the first two cases, alcoholic and arsenical neuritis, the poisons get into the circulation from without by means of the digestive system. In the other cases, or at least I may say without fear of contradiction in the cases of diphtheria and enteric fever, the toxins are manufactured in the blood or tissues, the result of the vital activity of certain specific micro-organisms.

Early in the study of beri-beri it was recognised that its symptoms must be due to some deleterious, if not actually poisonous, substance present in the circulation. With this in view many and various causes were mentioned by way of explaining the etiology of the disease. It was thought to be allied to rheumatism, to scurvy, to be a form of malaria. Wernich examined the blood in many of his patients, and he concluded that the disease was similar to pernicious anæmia. This theory, he maintained, would explain the cardiac failure, the dropsy, and the nervous and other symptoms. But it was found that the changes he described in the blood were by no means common to all cases of beri-beri, and that, indeed, many of these changes did not exist in reality, but only in his preparations, the result of his faulty methods of examination. Diet, again, was claimed to be the cause. It was said that many of the sufferers lived entirely on rice, and that on substituting a more nitrogenous food they showed marked signs of improvement. Others maintained that the diet was too rich in nitrogenous material and claimed an improvement on giving less. Impure water, overcrowding, gases from organic decomposition, were all given an important place among the causal factors of the disease. But a more adequate explanation than any of these had to be found, for not one of them was convincing or satisfactory. In some of the other infective diseases a micro-organism had been found in the blood or tissues of those affected. These organisms in growing produced certain poisons called toxins, and it had been shown that the poisons so produced were the causes of the characteristic symptoms of the disease. The task, therefore, which presented itself was to find in the blood or tissues of people suffering from beri-beri a specific micro-organism with characters analogous to the organisms of such diseases as diphtheria or enteric fever. Some idea of this kind was evidently in Simmons's[3] mind twelve years ago when he wrote as follows: "Ten years' study and observation of the malady (beri-beri) under a great variety of circumstances and conditions have led me to the definite conclusion that its exciting cause is a specific poison or germ, having many striking resemblances in its mode of production to paludal or marsh miasm, though entirely distinct and separate from it."

Various investigators have discovered micro-organisms in the blood and tissues of patients suffering from beri-beri, but unfortunately the variety of these organisms is very considerable. Pereira[4] in 1874 reported the presence in the blood of micro-organisms, which he described as "micrococci in rapid motion." He says he also found these in normal blood, and so he considered them as of no importance. It is therefore probably De Lacerda[5] who deserves the credit of being the first to describe an organism which he considered to be the cause of beri-beri. This was a bacillus, the same, he says, as he cultivated from rice, and the same as he found in the blood of rats that had died after eating the rice. Some years later, however, in 1887, De Lacerda[6] cultivated cocci from the blood of his beri-beri patients and by inoculating rabbits with the growth produced the symptoms of that disease. In 1885 Ogata[7] found in the spinal cord of a patient who had died from beri-beri a bacillus something like the anthrax bacillus. Growing in gelatin it had a "tree-like" appearance, and on agar-agar a "yellow-grey-white" colour. On injecting cultures of this bacillus into mice and dogs, he says, there was developed in them the symptoms of beri-beri. He cultivated the organism on a medium of gelatin and grape sugar, and found that the fluid resulting from this growth on being injected into animals caused paralysis. He found his bacillus in the intestines of those suffering from beri-beri, and concluded that it was the toxins of these bacilli being absorbed into the circulation that caused the paralytic symptoms. In 1887 Van Eecke[8] reported that he had cultivated four different kinds of organisms from the blood of his patients. These were as follows: (1) "Micrococcus albus," a micrococcus which was immobile, aerobic, and which liquefied gelatin; (2) "micrococcus tetragonus flavus," cocci arranged in tetrad forms; (3) "micrococcus flavus," also aerobic and liquefying gelatin; and (4) "bacillus flavus," short rods in pairs and chains, in active motion, aerobic, and with spore formation. On injecting animals with these growths, three of them, the first, third, and fourth, each produced paralysis. No result was obtained with "micrococcus tetragonus flavus."

However important all the above observations might be, it was not till Pekelharing and Winkler[9] took the subject in hand that anything like a satisfactory account of the bacteriology of beri-beri was given. These investigators in the first place sought for an organism in the tissues and cerebro-spinal fluid at their various post-mortem examinations, but with no conclusive result. On examining, however, the blood of the patients while alive the result was much more satisfactory. In the blood were found numerous micro-organisms, both cocci and rods, and these were demonstrated in unstained as well as in stained specimens. An extended inquiry as to the condition of the blood in people residing at Atjeh and at Batavia was next undertaken. In the former place, where beri-beri is very prevalent, most of the inhabitants had "cocci and bacteria" in their blood, whether they were actually suffering from the disease or not. At Batavia, on the other hand, where beri-beri is almost never met with, the blood of its residents showed total absence of these organisms. As regards the micro-organisms in the blood of the so-called healthy people in Atjeh it was pointed out that almost no one enjoyed good health there. Most of its inhabitants complained of a feeling of heaviness, lassitude, palpitation, pains, and often loss of tactile sensation in the legs. The medical men who were carrying on the investigation also experienced these symptoms, and they were not free from them till they removed to Batavia. Fresh arrivals at Atjeh had no micro-organisms in the circulation, but these could almost always be demonstrated after a short residence, disappearing, however, on removal from the infected neighbourhood. All these observations gave confirmation to the surmise that beri-beri was due to the micro-organisms in the blood. The next step was to cultivate the organism or organisms outside of the body. This was found to be a matter of considerable difficulty. Cultures were taken from the blood of eighty patients, in all of whom micro-organisms had been demonstrated to be present. Of the eighty tubes only fifteen showed any growths, and not all of these growths were alike. Of the fifteen, twelve were micrococci and three were rods. Of the twelve micrococci, nine seemed alike, and these showed a close

[1] Being a thesis presented to the University of Glasgow for the degree of Doctor of Medicine.
[2] Gowers: Diseases of the Nervous System, vol. i., p. 110.
[3] Simmons: "Beri-beri" in Pepper's Practice of Medicine, 1885.
[4] London Medical Record, 1882, p. 464.
[5] Bentley: Beri-beri; Scheube: Die Beriberi Krankheit.
[6] Sternberg's Bacteriology, 1896, p. 473.
[7] Bentley: Beri-beri; Scheube: Die Beriberi-Krankheit.
[8] Scheube: Ibid.
[9] Pekelharing and Winkler, "Beri-beri," Edinburgh, 1893.

resemblance in many of their characters to staphylococcus pyogenes albus. Two more of the tubes contained yellow growths; the twelfth was not well made out. The growths in the three tubes with rod-shaped organisms differed considerably from each other. It is to be noted that of the nine white micrococci six liquefied gelatin and two did not; the ninth was lost. In addition to cultivating these micrococci from the blood, Pekelharing and Winkler had no difficulty in growing a similar organism from the air of houses in Atjeh. It was now necessary to test the pathogenic characters of these micro-organisms. Single injections of cultures, it was found, produced no effects on animals; but this was quite to be expected, for the disease beri-beri differs from other infective diseases in that, while most of the others require but one exposure to their infecting agent, it is necessary to have a prolonged contact with the virus of beri-beri to ensure the development of that disease. And so the injections were given at intervals, and were continued over periods extending from nine to forty-eight days. Seven rabbits and two dogs were treated in this way with cultures of the white micrococcus. Six out of the seven rabbits and one of the dogs showed on post-mortem examination well-marked degeneration of their nerves. From the blood of these animals the same micrococcus was cultivated, and this in its turn produced a nerve degeneration in other rabbits. Cultures of the white micrococcus were given to rabbits along with their food and diffused in the air they breathed, with results similar to those obtained on injecting this virus. Again, saline solutions impregnated with the air of a room in Atjeh were injected into a rabbit. This animal died, and the post-mortem examination showed a degeneration of its nerves. Micrococci, too, were cultivated from this rabbit's blood, and these produced degeneration of nerves in other animals. Control observations were made, the control animals being kept under circumstances exactly similar to the ones receiving the injections. No nerve degeneration was found in the former. A rabbit was injected with a culture of staphylococcus pyogenes albus. The rabbit died in five days, and abscesses were found in its liver and kidneys, but no degeneration in its nerves. The pathogenic properties of the three rod forms and of the two yellow cocci cultures obtained from the blood were in a similar way investigated, but there was no certain evidence to show that any of these caused a nerve degeneration. The conclusion, therefore, that Pekelharing and Winkler arrived at was that the "white micrococcus" they cultivated from the blood is the cause of beri-beri. As to its liquefying gelatin or not, that they thought to be a matter of no moment, but to depend mostly on the culture medium on which the organism was grown. The "rod forms" were supposed to be extraneous, probably impurities. The "yellow cocci" they seem to think in some way related to the "white cocci," but on this point they are not very clear. They believe that the "white cocci" impregnate the air of the infected houses, ships, and districts, get into the human circulation through the air passages, and when they are absorbed in sufficient amount—some weeks' exposure to the infection being necessary—produce in the blood toxins in such quantity and of such a nature as to bring about a parenchymatous degeneration of the peripheral nerves.

Following on these observations of Pekelharing and Winkler came Eykmann[10] (1888), but he could not confirm their conclusions. He himself got only negative results from the study of the bacteriology of beri-beri. Neither could Mendes[11] agree as to the specific nature of the cocci of Pekelharing and Winkler. In 1887 Sternberg,[12] when in Rio de Janeiro, tried to cultivate an organism from the blood of four typical cases of beri-beri, but his results were also quite negative. Leopold[13] in 1892 isolated four micro-organisms from the blood of his patients. These were as follows: (1) "staphylococcus pyogenes albus"; (2) "micrococci in chains"; (3) "a small streptococcus, colourless, of unknown character and difficult cultivation"; and (4) a micrococcus which by inoculation in guinea-pigs and dogs causes a degenerative neuritis, and is described as the micrococcus of beri-beri. In 1893 Musso and Morelli[14] cultivated from the blood and ascitic fluid of two cases of beri-beri a micrococcus which, when injected into rabbits, produced symptoms of beri-beri. Scheube, in his "Die Beriberi-Krankheit," (1894), while recognising the importance of the observations of Pekelharing and Winkler, takes great exception to many of them. He maintains that they did not produce beri-beri in the animals they injected and that the cocci found by them are not the cause and not even one of the causes of the disease. If the organisms are present in the blood, why in sixty-five out of eighty cultures were no growths obtained? He says their results do not confirm each other and that some of them do not seem trustworthy. He does not think it probable that beri-beri can be produced by several organisms, as was suggested by Pekelharing and Winkler, and, again, he thinks they treat the bacilli and yellow cocci they cultivated too lightly. He wants to know how these could get into the test-tubes if not from the blood. He points out that some of the cocci liquefied gelatin and that some did not, the former seeming the more virulent. He asks why no result was obtained by giving injections from the blood of those affected with beri-beri. He maintains that the cause of beri-beri has not yet been discovered. Lastly, Fiebig[15] argues that the micrococcus cultivated by Pekelharing and Winkler is the same organism as staphylococcus pyogenes albus. He says the two have many resemblances and that they have no differences which could not be explained by alterations produced on growing them on different culture media.

From this account of the observations made and the opinions held as to the etiology of beri-beri it will readily be seen that all are not agreed as to the nature of its specific micro-organism. And in this connexion I may quote Dr. Spencer,[16] who, no later than seven months ago, wrote as follows: "In spite of the arduous researches of Pekelharing, Winkler, and others the organism which is the cause of beri-beri has not been satisfactorily or certainly determined." At this stage of the discussion, therefore, all fresh observations cannot but be received as evidence of some value. And so, I think, I need urge no excuse for presenting the results of a bacteriological examination of the blood in even only two cases of beri-beri.

Two firemen from the s.s. *Britannia*—(1) a man aged twenty-five years, and (2) a man aged twenty-three years—were admitted into No. 11 ward of the Glasgow Royal Infirmary on Feb. 26th, 1896. Their last port had been Bluefields, Nicaragua, and as far as could be made out they were two of seven lascars on the *Britannia* all affected with the same symptoms, and presumably the same disease, but not at the same time. Three of the seven had been sent to hospital in America, other two died on board the ship, and the remaining two, the patients under notice, arrived in Glasgow. When admitted into the ward each gave almost exactly the same clinical history and both showed very much the same physical signs. The symptoms, they said, were of three weeks' duration and had set in with a feeling of great weakness, lassitude, and loss of power in the legs. The gait of the patients was unsteady, especially so in the case of patient No. 2, who could not walk at all without support. The knee reflexes in both patients were absent, but the plantar and abdominal reflexes were quite active. No distinct muscular atrophy could be said to be present, although there was certainly some loss of power in the arms and in the legs. The reaction of degeneration was not fully developed. Most of the muscles in the limbs showed much lessened excitability to Faradaic electricity, yet some response was almost always obtained with a sufficiently strong current. The patients complained of pains and feelings of tingling and swelling in the feet, legs, and arms. The limbs were tender and painful to the touch, and there was a sense of constriction at the ankles, knees, and wrists, just as if a cord had been tied round these parts. Some degree of anæsthesia and analgesia was noticeable, especially in the legs. There was œdema of the legs, arms, and trunk in both the patients, but it was much more marked in the case of the second patient, who also had some cardiac complication. No murmur was to be heard over his precordial area, but the sounds were feeble, and the second sound, and sometimes the first sound, was re-duplicated. Moreover, he had signs of œdema at the base of both lungs, and possibly there was also some pleural effusion. The spleen and liver were normal in both the cases, and in both there was a trace of albumin in the urine. An examination of the blood showed

[10] Sternberg's Bacteriology, 1896.
[11] Scheube: Die Beriberi-Krankheit.
[12] Sternberg's Bacteriology, 1896.
[13] Bentley: Beri-beri; Schaube: Die Beriberi-Krankheit.
[14] Sternberg's Bacteriology, 1896.
[15] Scheube: Die Beriberi-Krankheit.
[16] THE LANCET, Jan. 2nd, 1897, p. 32.

the following: patient No. 1—hæmoglobin, 68 per cent.; red corpuscles, 114 per cent.; patient No. 2—hæmoglobin, 76 per cent.; red corpuscles, 125 per cent. These two patients remained in hospital for two and a half months, and their clinical history during that time is pretty much an account of their gradual recovery. The second patient had one bad attack of syncope four days after admission, and two days after that each had a considerable rise in temperature lasting for two or three days, and for which no explanation could be found. Otherwise, the temperature was normal, the œdema gradually disappeared, the motor and sensory troubles passed off, and the patients were dismissed well.

During the residence of these patients in hospital I had the opportunity of examining their blood on four different occasions, viz.:—On March 6th and 11th, April 25th, and May 9th, and the appearances which presented themselves were the same on each occasion and in each patient. The blood was examined with the $\frac{1}{12}$th oil-immersion lens in the fresh state as well as in dried specimens stained with eosin and methyl-blue, with fuchsine and with Biondi's stain. It was noted that the red blood corpuscles ran together into rouleaux, and that the white corpuscles were slightly increased in number, many of them containing large black granules. There also seemed to be an increase in the plates of Bizzozero. In addition to the above ordinary constituents of the blood, there were present in fresh specimens small granules or micro-organisms in very active motion. These little bodies were seen as single "granules" or cocci, or as cocci in pairs (diplococci), or more rarely as several cocci joined together. Sometimes, as in the last case, they were very similar to rod-shaped organisms, but this appearance I was convinced was caused rather by two or three cocci forming a short chain than by a rod-shaped organism. That the movements observed were not a Brownian movement, but due to the organism itself, I am quite convinced, and on this point other observers who were good enough to look at my preparations were all agreed. In the stained specimens the organisms appeared almost invariably as cocci in pairs, lying over or attached to the red blood corpuscles. Never were any rod-shaped organisms seen in these preparations.

I next directed my attention to cultivating these organisms on artificial media. Tubes of agar-agar, serum-agar, and gelatin were inoculated with the blood of the patients on the following dates and with the following results:—March 7th: four tubes each of agar-agar and serum-agar and two tubes of gelatin. Growth appeared on two tubes only—one agar-agar (Growth A) and one serum-agar (Growth B)—both from the blood of patient No. 1. March 14th: four tubes each of agar-agar and serum-agar and two tubes of gelatin. The only growth here (Growth C) was in a gelatin tube taken from patient No. 2. This tube had by mistake been placed in the incubator at 37°C. April 20th: Four tubes each of agar-agar and serum-agar. Growths appeared in two agar-agar tubes (Growths D and E) and in one serum-agar tube (Growth F), all from case No. 2. April 27th: Six tubes each of agar-agar and serum-agar. Growth on one agar-agar tube (Growth G) from case No. 1. May 8th: Six tubes each of agar-agar and serum-agar and four tubes of gelatin. Growth on one agar-agar tube (Growth H) from case No. 1. From the above it will be seen that of fifty-six tubes inoculated at various times from the blood of the two patients, unequivocal growths were obtained only in eight. Of these eight tubes five were agar-agar, two serum-agar, and one gelatin (also at 37° C.). Four of the growths were from patient No. 1, and four from patient No. 2. Throughout this investigation every care was observed so that no organism from without should get into the tubes, special attention being given to the cleansing of the patient's finger from which the blood was drawn. On further investigating these eight growths it was found that only three of them (E, F, and H) were pure cultures. These three seemed to be the same organism, for their characters were exactly alike. They grew rapidly on agar-agar, there being in twenty-four hours at 37° C. an almost continuous growth along the streak. In from two to three days this had increased to an abundant pearly-white, club-shaped growth, with slightly scalloped edges, presenting an appearance almost identical with a similar growth of staphylococcus pyogenes albus. Cover glass preparations stained with fuchsine showed the organisms to be cocci grouped so as to form staphylococci. These also stained well with Gram's method. Plate cultures were made both with agar-agar and with gelatin, and each showed the growths to be quite pure. With a low power the colonies on the agar plate were noted to consist of light-yellow or straw-coloured discs, finely granular, with well-defined edges and small, dark centre. There were also other forms to be seen, much smaller, darker in colour, round or lozenge-shaped, and in appearance rather like an uric acid crystal. These were usually separate from the larger discs, but sometimes they overlapped them, seeming to grow out of them, giving an appearance as if the darker growths were the stalk, and the lighter growths the bell, of a mushroom-shaped colony. On gelatin plates of five days' growth the colonies had much the same appearances as the above larger discs, only they seemed thicker and more granular. There were very few of the dark uric acid-looking plaques to be seen. On examining a "hanging drop" preparation cocci, solitary and in pairs, were seen to be in very active motion. The appearances here reminded one of those presented by these organisms in the fresh blood, for the kind of movement was almost exactly alike in both cases, and it certainly was not a movement in the fluid, but inherent in the cocci themselves. As to whether or not these cocci had flagella I cannot say definitely, but if they had I was quite unsuccessful in my attempts to stain them. The micrococci grow rapidly in bouillon broth, giving it in twenty-four hours a muddy appearance. The reaction of the culture-medium after a few days was strongly acid. It was demonstrated that a small amount of sulphuretted hydrogen was given off from this medium during the growth of the organisms. The addition of potassium nitrite and sulphuric acid to the bouillon growth showed the indol reaction, though faintly, yet quite distinctly. When grown on milk a coagulation is developed in from two to three days, and the fluid which separates has a strongly acid reaction and a distinctly sour smell. Stab-cultures in gelatin develop slowly and liquefaction does not seem to be constant. When it does take place it does so very slowly, sometimes along the streak, sometimes transversely at the upper part of the gelatin. Each of the three cultures we are now considering at first did liquefy gelatin, but growing them on gelatin seemed to lessen and even destroy this capacity. The growths E and F are examples of this, for now, after some eight or nine months' growth, partly on gelatin and partly on agar, I cannot get them to liquefy gelatin. At no time, even in summer, did liquefaction take place in less than a fortnight, and sometimes it did not develop till six weeks had elapsed. In the tubes where liquefaction took place the organisms, which fall to the lower level of the fluid, developed a dirty orange-coloured pigment. The fluid itself had a neutral reaction. The remaining five growths, A, B, C, D, and G, were impure, but on making plate cultures and isolating their component organisms it was found that each of the five contained a staphylococcus similar to that of E, F, and H, whose characters we have just been considering. From each there was, in addition, isolated a rod-shaped organism, but not in any two growths was this organism the same. Thus, in growth A, where both cocci and rods are to be made out in the cover-glass preparations, a staphylococcus was isolated whose appearances on plate cultures, in agar-agar tube, in bouillon broth, in its power of liquefying gelatin, &c., showed it to be the same as the growths E, F, and H. The rod-shaped organism on agar-plate cultures formed light brown or yellow colonies, quite round, granular in appearance, with fairly well-defined edges. There were also some plaques to be seen, light yellow in colour, and usually overlapping each other. The appearances on gelatin plates were very similar. On an agar-agar tube there appeared in twenty-four hours pearly-white, rounded colonies which tended to run into each other along the streak. On staining this growth it was seen to consist of short, thin rods, not stained uniformly. These stain by Gram's method, but every attempt to stain spores was unsuccessful. Hanging drop preparations showed rods in active motion. Gelatin liquefies slowly. Growth B also contained a staphylococcus of the type I have already described, except that it never liquefied gelatin. The rod organism isolated had very distinctive characters. On agar plates a colony appeared under a low power, as a more or less rounded body of amber colour, with several processes, giving in all an appearance as like as possible to that of the itch insect—acarus scabiei. After four or five days' growth on an agar tube the culture which was white began to spread out at its edges into

branches, presenting an appearance like that of a fir tree. Cover-glass preparations showed short thick rods, many of which only stained at their two ends. These rods stain well with Gram's method and show spore formation when stained for spores. A hanging drop reveals large strong rods all in active motion. Growth in gelatin stab-cultures is very slow, and when it does take place it is in the form of white fluffy discs deep down in the culture medium. There is no liquefaction of the gelatin. The next growth, C, contained a staphylococcus the same as in the other tubes. This organism grew well in gelatin, but never caused any liquefaction. The other growth isolated from tube C was a rapidly growing bacillus, which readily liquefied gelatin, and in its plate culture appearance and other characters showed itself to be bacillus mesentericus vulgatus. Growth D also contained the white staphylococcus, which in this case liquefied gelatin in three weeks. The other organism present here was a bacillus, which on agar plates presented darkish-brown, hairy-looking colonies, with rather irregular outline. The agar tube taken from this in two days had a thin scum-like growth over part of its surface, and on being stained it was seen to consist of long strong rods swollen at their ends; spores were made out to be present. This bacillus was actively motile and stained by Gram's method. In the last growth we have to consider, Growth G, the staphylococcus present did not liquefy gelatin, but otherwise it corresponded in every detail to the type already so often mentioned. The rod form here consisted of short bacilli, which stained with Gram. It was a growth very difficult to cultivate, and as it died soon its characters were not completely made out.

We have now to consider the pathogenic characters of these growths from the blood of our beri-beri patients. I shall therefore proceed to give an account of the results obtained by injecting six rabbits with some of these organisms. The plan pursued in every case was to grow the micro-organism in bouillon broth for forty-eight hours, and then to inject a certain quantity of this culture, either full strength or diluted with an equal quantity of sterilised water, into the abdominal cavity of the rabbit. Special care was taken in every case to make the syringe employed aseptic and to cleanse thoroughly the skin of the rabbit before giving the injection.

Rabbit No. 1, a fairly large animal, was injected with the pure staphylococcus growth E. Eleven injections were given in twenty-six days—i.e., three injections per week. The first five injections each consisted of 3 c.c. of the broth culture, the sixth of 4 c.c., the seventh and eighth of 5 c.c., and the ninth, tenth, and eleventh each of 12 c.c. The day after the last injection the rabbit showed signs of paralysis. It could not stand, but lay on its side panting for breath. The fore legs and hind legs were extended, and it seemed quite unable to flex them. The animal was killed at once, and an examination made a few minutes later, but nothing abnormal could be made out in any of the organs. There was very slight induration at the part of the abdominal wall where the injections had been given, but no appearance of an inflammation of any of the peritoneal membranes. The liver, kidneys, and spleen seemed quite healthy. The nerves of the hind legs were kept for microscopic examination. Cultures were taken from the blood in the heart, from the spleen, and from the liver. Eighteen tubes in all were inoculated, and in exactly half of these was a growth obtained. Cover-glass preparations were made, and in all these tubes the organism present was found to be a staphylococcus. Four of these growths were now examined in detail, and they were all demonstrated to have the same characters as the coccus which had been originally injected into the rabbit.

Rabbit No. 2, a smaller animal, was injected with staphylococcus growth F. In this case six injections, each of 2·5 c.c., were given in twelve days. On the twelfth day the animal was seen to be dying, its head being much retracted and its legs fully extended. It was killed and examined at once. The appearances which now presented themselves were exactly the same as in rabbit No. 1, except that on the surface of the liver there were several small white spots about the size of half a millet seed, which were taken to be small abscesses. They contained many staphylococci. Tubes were inoculated from the abscesses and with the blood in the heart and spleen. There was a growth in the heart culture and in the abscess culture, and both of these were shown to have the character of the white staphylococcus which had been injected into the rabbit.

Rabbit No. 3, also a small animal, was injected with Growth H. Three injections of the bouillon culture, each of 6 c.c., were given in five days. About a quarter of an hour after the last injection the animal died. The post-mortem examination was quite negative, at least, as regards naked-eye appearances. There was no sign whatever of an inflammatory process in the abdominal cavity. Owing to an accident no growths could be obtained from the blood of this animal.

Rabbit No. 4 much larger than the last rabbit, was injected with the same growth (H). In this case it took six injections, each of 3 c.c., extended over twelve days, to kill the animal. Although it had seemed quite well at the last injection the rabbit was found dead the next morning. The post-mortem appearances corresponded to those of rabbit No. 2 in there being several abscesses or collections of cocci scattered over the surface of the liver. Otherwise the macroscopic examination was negative. A growth was obtained in only two of the cultures taken, and both of these were from an abscess in the liver. In this rabbit, however, only eight tubes were inoculated, and this may account for there being no cocci grown from the blood. The two growths from the liver were quite pure and contained the white staphylococcus the same as had been injected into the abdominal cavity.

Rabbit No. 5 was small, similar to Rabbit No. 2. It was injected with Growth A, which contained both staphylococci and bacilli. Seven injections, each of 2·5 c.c., were given in fourteen days. The rabbit died on the sixteenth day, with limbs extended and head retracted. The post-mortem appearances were exactly similar to those in the last rabbit, there being here also small white abscesses in the liver. White staphylococci were grown from the blood of the heart and spleen, but no bacilli were found in any of the cultures.

Rabbit No. 6 was injected with Growth G; also both cocci and bacilli. Four injections, each of 6 c.c., were given in eight days. Five hours after the last the animal died with well-marked signs of paralysis. The post-mortem examination was negative; no abscesses were present in the liver. Four tubes were inoculated, two from the blood in the heart and two from the spleen. Growth presented itself in three of these. Two were pure staphylococci, but the third, in addition to the same staphylococcus, contained a rod-shaped organism. This bacillus, however, on plate cultures and otherwise, showed itself to be quite a different organism from that contained in Growth G, and so I take it to be an impurity and to have no relation to the subject in hand.

Nerves from the hind legs of these six rabbits were removed, stained, and examined microscopically. In doing this great care was taken so as in no way to stretch or otherwise bring about an artificial appearance in any of the nerve fibres. The nerves were fixed and stained at the same time in osmic acid (1 per cent.), and most of them counter-stained with alum carmine. Portions of the nerves were then cleared in a mixture of aniline oil and xylol, and then in xylol alone, and while in the latter the individual nerve fibres were as much as possible separated the one from the other. The specimens were mounted in Canada balsam. To make sure that this process had nothing to do with the altered appearances in these nerves I prepared in exactly the same manner nerves from a healthy rabbit, and these latter I found to remain perfectly normal. A careful microscopic examination of the nerves from the six rabbits readily convinces one that a parenchymatous degeneration is present in every case. This certainly is much more marked with some than with others—for example, in rabbits No. 2, No. 3, No. 5, and No. 6 the degeneration is so complete that there is difficulty in finding a normal nerve fibre. In rabbits No. 1 and No. 4, on the other hand, many healthy fibres are to be seen. In the degenerated fibres the myelin is sometimes seen as a series of frothy-looking masses filling up the sheath, and giving a segmented appearance to the fibre. Sometimes the myelin is in the form of small rounded balls stained black or brown in the centre of the sheath. Sometimes, again, the sheath seems empty except for its nuclei, which in some of the specimens are much increased in number. Some of the nerve-fibres have a spindle shape, one part of the sheath being filled and swollen up with frothy myelin, while an adjoining portion has its walls in close apposition, the myelin at this part having disappeared.

The importance of micro-organisms as factors in the causation of disease is now well recognised. But the discovery of "specific microbes" has so often been claimed, and these

claims have so often proved unfounded, that the scientific world is very slow to recognise any such discovery without its being backed by the strongest proof. The conditions which are now considered necessary to prove a certain organism the cause of disease have been laid down by Koch.[17] They are as follows: (1) The micro-organism must be found in the blood, tissues, or secretions of the animal affected with, or dead the result of, the disease; (2) this organism must next be cultivated on media outside the body, and this for several generations of the organism; (3) this culture in turn must be shown to produce on inoculation the same disease in a healthy animal; and (4) in this animal the same micro-organism must again be found. To these four conditions have been added[18] (5) that the same micro-organism must be found in all cases of the particular disease under consideration; and (6) that this organism must never be found in any other disease. The first four conditions were certainly fulfilled by Pekelharing and Winkler before they claimed their white staphylococcus to be the specific micro-organism in beri-beri. And in view of all the criticism their observations and conclusions evoked, it is a great satisfaction to me to find that my results, be they only from two cases, correspond to, and, if I may say, corroborate in almost every detail, the work of these two men. I found a micrococcus to exist in the blood of the two patients on every examination. A micrococcus was demonstrated to be present in all the cultures obtained from this blood. The injection of these cultures into rabbits was followed by signs of paralysis, and at the post-mortem examinations peripheral neuritis—the characteristic lesion of beri-beri—was a constant appearance. Lastly, the same micrococcus was found in the blood or tissues of the rabbits so treated. So that I, too, have fulfilled Koch's four postulates, and therefore my conclusion also must be that this white staphylococcus is the cause of beri-beri.

On considering again for a moment the opinions of the former writers on this subject we find that the great majority of them also seem to be in favour of the micro-organism being a white staphylococcus. Pereira found micrococci in active motion in the blood, and the reason doubtless that he failed to obtain results by injections with these micro-organisms is that he did not understand that not one only, but many injections are required to develop the disease. His observation as to the presence of these micrococci in 3½ per cent. of healthy people corresponds in a measure to that of Pekelharing and Winkler, who, as we have seen, explain that in an infected district the so-called healthy are seldom really healthy, but suffer in some degree from the presence of the micrococci in their circulation. The later observations, too, of De Lacerda, the conclusions of Van Eecke, of Leopold, of Musso and Morelli, all are in favour of a micrococcus. It is true that much from these last cannot be taken as sound evidence, for they do not seem in many cases to have fulfilled Koch's "laws" before drawing their conclusions. Yet be its value what it may, this evidence is in favour, and certainly not against, a micrococcus being the specific cause of beri-beri. Ogata, on the other hand, claimed a bacillus to be the organism. This, however, as far as I can make out, was never cultivated from the blood of his patients, but from the alimentary tract, and after death from the fluid or tissues of the body. Now, one understands that it would not be difficult to cultivate from a dead body, and this especially in a warm climate, an organism whose toxins injected into a mouse would cause the "symptoms of beri-beri." And may not the same be said of a culture taken from the alimentary tract, especially in patients not in good health? I think, therefore, we need give this evidence of Ogata in favour of a bacillus little consideration.

As to explaining the presence of the bacilli found by me in five cultures, and by Pekelharing and Winkler in their cultures, and so often in the fresh blood, considerable difficulty presents itself. That none of the bacilli in my five growths is likely to be the cause of beri-beri seems pretty certain. In the first place they were never seen in the blood either in fresh or in stained specimens. They are all different organisms. One of them, bacillus mesentericus, has well-known properties of its own. Two of them, each associated with the white staphylococcus, on being injected into rabbits, could not be found in their circulation, and therefore they probably did not live in the blood of the rabbits. Certainly to have completed the argument I should have tested the pathogenic characters of pure cultures of these bacilli. But as no one of them occurred twice their presence did not seem of sufficient importance to necessitate this proceeding. And here it is to be remembered that Pekelharing and Winkler proved the non-pathogenic character of the bacilli they isolated.

What, then, is the meaning of these bacilli in growths taken from the blood and how do they get there? They must either have been in the blood, on the skin of the finger, or have otherwise got into the tube from without, during the process of inoculation. If from either of the two latter sources, why have they only grown when associated with a staphylococcus, an organism almost certainly grown from the blood, and why never in any of the forty-eight tubes that remained sterile? If, again, they are from the air why only in one case was it a well-known micro-organism—bacillus mesentericus? The remaining explanation which presents itself is that the bacilli exist in the circulation as saprophytes. And in favour of this view it might be pointed out that the presence of the staphylococcus of beri-beri must lower the vitality and resisting power of the blood and tissues. In this condition, therefore, the existence and growth of saprophytes would be possible. That saprophytes, however, are not common in the blood in disease I can affirm, for during the past two years I have examined the blood, both in stained and in fresh specimens, of some eighty patients chosen from the general wards of the hospital. Only in very few cases, some pneumonias and cases of endocarditis, were micro-organisms of any kind to be found. But, on the other hand, it is well known that certain pathogenic organisms have not uncommonly present with them others which are non-pathogenic. As an example of this one may cite the frequent association in pus of the micrococci cereus albus and flavus with the streptococci and staphylococci pyogenes. But even if these bacilli in our cultures were not saprophytes, but had well-known pathogenic characters, that in no way need be an argument against our white micrococcus being the specific micro-organism of beri-beri. The presence of staphylococci and streptococci in diphtheria, associated with the bacillus of diphtheria, does not lessen the claim of that bacillus to be the specific cause of the disease, even although it has been shown that the toxins from the cocci when injected into guinea-pigs caused paralysis.[19] The important thing is that in diphtheria the bacillus of diphtheria is found constantly present, while the cocci are not; and the bacillus, too, is known to produce diphtheria whenever injected into animals. What I wish to bring out, therefore, in regard to beri-beri is that the great mass of evidence so far seems to be in favour of the micrococcus of Pekelharing and Winkler being present in all cases of beri-beri. And as this micro-organism has the property of producing when injected into animals a neuritis similar to that in beri-beri, the conclusion to be drawn is that this micrococcus is the cause of beri-beri. That the bacilli and cocci seen in the blood by the Dutch writers are, as they suggest, just two different forms of the same organism is not an explanation which commends itself to one's mind. For as far as I know there is in bacteriology no analogy for such an explanation. It is much more likely that the Dutch writers were dealing with impure growths containing both cocci and bacilli, and which, as I found, often required repeated plate cultures to be made before each could be isolated. As regards the variety of micro-organisms found in the blood by Leopold and Van Eecke, their descriptions are not sufficiently definite to let one recognise them, nor is the account of the pathogenic properties given by Van Eecke of the organism found by him at all satisfactory. Besides, most of what has already been said on the bacilli found in the blood will also apply to these other organisms. One point I wish to note here is that in my two cases the micrococci did not disappear from the blood on the patient's leaving the place of their infection. For these micro-organisms were still to be seen, and were cultivated, after two and a half months' residence in hospital and after practically all signs of the disease had disappeared.

We have now to consider Scheube's criticism of the Dutch writers, and much that he says is doubtless petty and requires no answer, but there are some points raised by him which may well demand consideration. (*a*) Scheube asks

[17] Crookshank's Bacteriology, 1896, p. 9.
[18] Schenk's Bacteriology (London, 1893), p. 92.

[19] Société de Biologie, May 29th, 1896, reported in Gazette Médical de Paris, June 13th, 1896.

why the micrococci of beri-beri are so difficult to cultivate from the blood, Pekelharing and Winkler only obtaining fifteen growths out of eighty inoculations, and not all of these containing cocci. I do not know that any very satisfactory answer can be given to this question, which is, I think, applicable, not only to beri-beri, but also to other diseases caused by micro-organisms, and this difficulty of cultivation from the blood is the only explanation I can give for the negative results obtained by Sternberg and other observers. (*b*) He asks why single injections with the blood of beri-beri patients do not cause the disease in animals and why repeated doses must be given so that it may develop. The reason, doubtless, is that up to a certain point the blood of the animal infected has the capacity of destroying micro-organisms either by its phagocytes or by an "antitoxin" which it seems to contain in its serum. When too many organisms get into the circulation the blood is not able to deal with them, and so they grow, producing their toxin, which, being no longer neutralised, gives rise to the symptoms of the disease. (*c*) Scheube seems to consider it impossible that the Pekelharing and Winkler staphylococcus may at one time liquefy gelatin and at another not be able to do so. But is it not the case that such a well-known micro-organism as the staphylococcus pyogenes albus sometimes shows this characteristic?[20] and the observations, extending over ten months, which I made on this point entirely confirm those of the Dutch writers. I found the liquefaction of gelatin always slow. I found that some of the growths which liquefied gelatin at first did not do so later. This, as far as I could make out, was in those organisms that had been growing for a considerable time on gelatin. Three of the growths at no time liquefied gelatin, but these were separated from impure growths, and possibly the presence of the other organism had lessened the virulence of our micrococcus. As far as I could make out, the virulence of the micrococcus was in direct proportion to its power of liquefying. For example, Growth H always liquefied gelatin, and when injected into rabbits it killed them rapidly and with small doses (Rabbits No. 3 and No. 4). Growth E, on the other hand, which had lost the power of liquefying gelatin before being injected into Rabbit No. 1, did not kill till many days later, and even then required much larger doses of the culture. Nor did the cultures grown from these and the other rabbits inoculated liquefy gelatin any more rapidly. This seems strange, for one expects the virulence of an organism to be increased on passing it through an animal that is not immune.

I have yet to refer to Fiebig's objections to the staphylococcus of Pekelharing and Winkler. He says it has the same characters as staphylococcus pyogenes albus, and he maintains that it is the same organism. It certainly has much the same morphological appearances, but the pathogenic characters of the two are very different. For would a culture of the staphylococcus pyogenes albus injected into the abdominal cavity of a rabbit produce no septic results? In not one of my six rabbits did an abscess form at the seat of inoculation, and in not one was any inflammatory condition of the peritoneum to be made out. Certainly in some of the rabbits minute abscesses were found in the liver, but these, I take it, may be looked upon as collections of cocci growing in a part of the circulation where the blood tends to stagnate. As to whether the staphylococcus pyogenes albus may under special circumstances become the staphylococcus of beri-beri or *vice versâ* I cannot say; but at present there seems to be as much difference between the two as there is between the pseudo-bacillus of diphtheria and the bacillus of diphtheria itself.

And now in conclusion it may be asked—Is it finally settled that the staphylococcus of Pekelharing and Winkler is the specific micro-organism in beri-beri? The reply is difficult. We know that medicine is not an exact science, and that its conclusions cannot therefore be drawn with the absolute certainty of a proposition in Euclid. The methods of medicine are those of observation and induction, and only when very numerous observations have been made can the conclusion be drawn with even a degree of finality. But where a finding cannot be absolute it may sometimes be comparative. When our observations are only few, then our conclusions can only be comparatively true. In medicine this latter is a position we often find ourselves occupying, and it would seem to be the one we are now standing in as regards the causation of beri-beri. A certain number of data have been furnished as to the etiology of this disease, and from these the conclusion to be drawn is, as I have contended in the foregoing arguments, that the staphylococcus of Pekalharing and Winkler is its specific micro-organism. This, doubtless, is only a "comparative" conclusion, for we have not yet data to draw one more certain.

I wish, in concluding, to express my very best thanks to Dr. G. S. Middleton, who so kindly placed at my disposal his two cases of beri-beri, with their clinical histories contained in his ward journal. I am also much indebted to Dr. Lindsay Steven, to Dr. Workman, and to Dr. Barlow for the use of their laboratories and apparatus.

Glasgow.

[20] Crookshank's Bacteriology, p. 178.

ON REMOVAL OF THE EYE AND MULES'S OPERATION.

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A RECENT number of THE LANCET contained an abstract of a paper on "Sympathetic Ophthalmitis, especially in connexion with Mules's Operation of Evisceration,[1]" which was read before the Ophthalmological Society by Mr. Richardson Cross, of Bristol, and also an abstract of the discussion which ensued. I had been forewarned of this paper and discussion, and should have been glad to hear the former and to take part in the latter, had I not been restrained from doing either by paramount considerations. I was compelled to withdraw from the Ophthalmological Society some years ago in consequence of the attitude of indulgence which it assumed towards homœopathy, an attitude which in my judgment was unworthy of honourable practitioners of legitimate medicine and surgery. I fancy that both Mr. Cross's paper and the discussion upon it must have been reported for the society by a homœopath, and that hence the valuable observations which both, no doubt, contained have been administered to your readers in a state of high dilution and mixed with an inordinate quantity of inert material. I read, for example, that Mr. Cross cited "*several* instances in which sympathetic irritation or ophthalmitis, had followed the operation, the proportion being as high, he said, as 13 per cent."; and, again, that he "was sure *many* cases occurred after Mules's operation even with the strictest antiseptic precautions and *often* after *many* years." The italics in both quotations are mine; and it seems almost certain that in the paper Mr. Cross must have made more precise statements than those which are attributed to him. He must surely have said how many cases of Mules's operation he had seen, how many of them had been followed by sympathetic irritation, and how many by sympathetic ophthalmitis, and exactly what he meant by "many" years in the case of a procedure which has not yet been twelve years before the profession. These and other details of equal importance will probably appear when the paper is published; but this, as I understand, will not be for some months, and then only in the Transactions of the Ophthalmological Society, a volume little likely to fall under the notice of any who are not members. The question at issue is one of very considerable importance, alike to the public and to the medical profession generally. Its discussion should not be confined within the narrow limits of a little coterie of the lovers of homœopathy, nor should any of the evidence with regard to it be consigned to a living death in the pages of their annual publication.

Dr. Mules's paper describing his operation was read in the Section of Ophthalmology and Otology at the Cardiff meeting of the British Medical Association, and was published in December, 1885.[2] Immediately after the publication I began to perform the operation, both in hospital and in private practice, in nearly every case in which I should previously have removed the eye, and I have continued to do so ever

[1] THE LANCET, June 26th, 1897.

[2] Brit. Med. Jour., Dec. 19th, 1885. It may be worth while to mention that it will be found on page 1153 of the volume, and not on page 1123, as stated by error in the index.

since. I have only removed eyes (1) in cases of intraocular growth of suspected malignancy; (2) in cases in which sympathetic ophthalmitis had commenced; and (3) in a few instances of blind and painful eyes in aged people, for whom it was desirable to avoid the healing stage of a Mules's operation and with whom appearance was a secondary consideration. I retired from active duty at St. George's Hospital in 1893, so that my experience of Mules's operation extends over nearly eight years of hospital practice and over nearly twelve years of private practice. Before stating my results I would crave permission to lay down a few definitions.

In the first place, by "Mules's operation," I mean the operation as described by Dr. Mules himself and not anything else. In his own words, it is "an operation requiring care, dexterity, and careful attention to detail," and he directs the operator to take "especial care to remove the ciliary body and choroid, leaving a clean white sclera." I desire to emphasise this because in the discussion on Mr. Cross's paper Mr. Treacher Collins is reported to have asked a question on this point which was not satisfactorily answered. Moreover, an eminent surgeon once expressed to me his disapproval of Mules's operation, and rested this disapproval on a case in which he had removed the resulting stump, and had found in the scleral cavity the remains of lacerated ciliary nerves. Whatever had been done in this case was not "Mules's operation."

It seems also necessary to define "sympathetic irritation" and "sympathetic ophthalmitis." By "sympathetic irritation" I mean a state which was first described under that name, so far as my knowledge extends, by the late Professor Donders, about 1865, in one of the *Bijbladen* which it was his custom to append to the annual administrative reports of the Netherlands Ophthalmic Hospital. I have lost or mislaid the paper; but to the best of my recollection it related the case of a blacksmith, in one of whose eyes a considerable fragment of iron had lodged, destroying the sight, and occasioning, after a time, inability to use the other eye. The "irritated" eye was the subject of photophobia, lacrymation, pain, and spasmodic closure of the lids; and the patient had been unable to work for many months. The injured eye was to all appearance passive; but it was removed, together with its contained iron, and the patient was immediately and permanently cured. A few analogous cases have since been published, and in one of my own the patient, a woman, suffered, not only from eye "irritation," but also from fits resembling epilepsy. She had a violent fit when I divided her optic nerve in removing the injured eye; but it was the last, and, like Donders' blacksmith, she was cured by the operation. Cases of sympathetic irritation may be more or less severe, but their characteristic feature seems to be that the irritation has little or no tendency to pass into inflammation or to produce any structural changes in the affected eye, and that it is at once relieved by the removal of the peripheral source of the morbid reflex. I should not hesitate to endeavour to cure it by a Mules's operation, which would probably be quite as effectual as the removal of the offending eye in its entirety. I may add that, in my experience, sympathetic irritation is extremely rare; and that to hear of "several" or "many" instances of it occasions me some perplexity.

The definition of "sympathetic ophthalmitis" is more difficult, in view of the well-known fact that both eyes are liable to become diseased, one at a later period than the other, in many affections which are not commonly supposed to be "sympathetic" in that which is the last to suffer. Conjunctivitis, phlyctenulæ, iritis, ulcerative keratitis, inherited interstitial keratitis, cataract, glaucoma, and many other conditions are all prone to occur in a second eye after they have become developed in the first; and there are but few of these maladies in which the hypothesis of "sympathy" could be sustained by any evidence at present known to us. Swanzy defines sympathetic ophthalmitis as "a uveitis (irido-cyclitis, irido-choroiditis) caused by an irido-cyclitis of the other eye, the latter being usually of traumatic origin." Noyes gives nothing which can be called a definition. Klein, in Eulenburg's Real-Encyclopädie, says: "Wenn ein Auge in Folge einer spontan oder nach Verletzung entstandenen Erkrankung des anderen Auges desselben Individuums erkrankt und *nur in Folge* dessen erkrankt und nachweislich jede andere Krankheitsursache ausgeschlossen ist, so heisst die Krankheit eine *sympathische*." He continues: "Es sind mithin von diesem Begriffe alle jene Krankheitszustände ausgeschlossen, welche sich in Folge äusserer Einflüsse oder constitutioneller Körperverhältnisse des Individuums, in Folge von Allgemeinleiden oder Blutentmischungskrankheiten an beiden Augen desselben Individuums zu gleicher Zeit oder kurz oder auch längere Zeit nach einander einstellen." I conceive this to be an accurate statement of the case as far as our present knowledge extends; and I doubt whether the necessity of strictly limiting the meaning of the term "sympathetic" has always been sufficiently borne in mind by those who have written upon the subject. Of late years, for example, it has been said that inflammation and subsequent atrophy of the optic nerve may not only be a manifestation, but even the sole manifestation of "sympathetic ophthalmitis," although it is at least certain that we see such inflammation and atrophy far more frequently in cases from which the hypothesis of sympathy must be excluded than in those in which it may, even as a possibility, be admitted. It seems to be beyond the reach of doubt that certain injuries of one eye are liable to be followed by irido-cyclitis or irido-choroiditis of the other; but I am not acquainted with any other form of "secondary" eye disease in which the antecedent is sufficiently constant to be safely made the subject of a generalisation.

The difficulties hence arising are enhanced by the fact that we have no knowledge of the channels through which the forms of ophthalmitis which we most confidently regard as "sympathetic" are conveyed from one eye to the other. The ciliary nerves, the optic nerves, and the lymph channels have successively been pressed into the service; and of late years the *materies morbi* has been supposed to be derived from the omnipresent bacterium. Nothing has, so far, been proved. Donders, some five and thirty years ago, removed an injured eye in which one of the long ciliary nerves was entangled in a mass of cicatricial tissue; and to this entanglement, or to the irritation attendant upon it, he attributed the "sympathy" which had been produced. Mooren, about the same time, in removing a wounded eye with the object of preventing sympathetic ophthalmia, bruised the optic nerve in dividing it with faulty scissors; and to this accidental injury he attributed the sympathetic ophthalmia which, in spite of the removal of the wounded eye, was soon afterwards developed. As for bacteria, I have not yet heard that any specific organism has been discovered, either in the eye which has excited the sympathy, or in that to which the morbid influence has been conveyed. With regard to causation, therefore, we are not able to go beyond conjecture; and we are entitled to regard as sympathetic the common form of irido-cyclitis of one eye, occurring subsequently to an injury of the other, only because such a succession of events has been too frequent to be any longer regarded merely as a coincidence. We are very far from being able to affirm that every form of disease occurring in an eye the fellow of which has been injured must be looked upon as a "sympathetic" consequence of the injury. In a great number of cases the balance of probability would, as it appears to me, be rather in the contrary direction. I therefore propose, for the purpose of this communication, to accept Swanzy's definition of sympathetic ophthalmitis, and, at least provisionally, to regard the cases in which disease other than irido-cyclitis or irido-choroiditis has appeared in a sound eye at an uncertain time after disease or injury of its fellow as being open to the possibility of some different explanation.

At this point I should like to enter a modest and gentle protest against the use of the far-fetched and nasty metaphors, "eviscerate" and "exenterate," by which the operation of removing the contents of the eyeball has been described. "Eviscerate" and "exenterate" are good English words, with legitimate although disagreeable meanings; but their metaphorical application to the eye has been "made in Germany." The crystalline lens is not a "viscus," nor are the choroid and retina "entrails." We do not "eviscerate" a filbert, nor do we "exenterate" an egg, nor do we "disembowel" a bottle of champagne. We "empty" the several cavities of their contents, and we do the same with the sclera. Dr. Mules, in his paper, states that emptying the sclera as a substitute for removal of the eye was first suggested, simultaneously and independently, in 1884, by himself and by Professor Alfred Graefe. This is so far an error that the same thing was done by Dr. Noyes, of New York, as early as in 1872, in order to convert a spoilt eye into a good stump for an artificial one.

Having so far tried to clear the ground, I may say that I have performed Mules's operation in about 150 cases. In consequence of the accidental loss of some notes I am unable to

state the precise number; but this total is not far from the truth. The patients have been of both sexes, and of ages ranging from nine months to seventy years. Speaking generally, I have been more than satisfied with the results. One loses sight, of course, of the majority of hospital patients; but many of my private patients, after several years, are still wearing artificial eyes with perfect comfort and with natural appearance. There is no irksome pressure from the edges of the artificial eye, no hollow between the upper lid and the margin of the orbit, and no cavity in which secretion accumulates. There is free mobility of the artificial eye in all directions—somewhat less, of course, than that of the natural eye, but sufficient to preserve the correct relative positions in ordinary use. I have lately seen three patients who were respectively operated upon in the years 1836, 1837, and 1838; and to all of them, as well as to more recent cases, the foregoing description will apply. In my early operations, for want of experience with regard to certain details, such as the best size of ball, or the best material for sutures and the best way of inserting them, I frequently failed to obtain complete union; and, with an exception to be presently mentioned, incomplete union always involved the ultimate escape of the ball. Even if the original opening were a mere pinhole it underwent dilatation, as the ball was pressed against it from within by the external ocular muscles, the effect sometimes reminding me of the dilatation of the os uteri by the fœtal membranes. The consequent enlargement of the opening was often very slow, and was always painless until the diameter was nearly equal to that of the ball. It then became painful by reason of the greater force which the muscles were able to exert; and it has been my practice in such cases slightly to incise the margins of the opening and to let the ball come out. The exception referred to was in the case of a man on whom the operation was performed in 1890 for very painful acute hæmorrhagic glaucoma. Two small openings were left with a band of firm tissue between them; and this band so resisted the forward pressure as to prevent the ordinary dilatation from occurring. The patient died from renal disease in 1893, the size of the openings having remained unchanged, and the artificial eye leaving nothing to be desired as regards either comfort or appearance. In a few cases in which openings were left I have endeavoured to close them by a second operation, sometimes immediately, sometimes after an interval, but none of these endeavours were successful. In two instances only, in which the union was originally complete, it afterwards gave way. The first patient was operated upon in November, 1887, he being then past seventy, on account of septic inflammation following a severe wound inflicted by a piece of dirty wood. He came to me in June, 1891, with some irritation of the stump; and I found that he had been wearing the same artificial eye, usually day and night, for the whole of the three and a half years which had elapsed. I had it replaced by a new one, and gave the parts a little rest before this was worn. He came again in February, 1894, the cicatrix having given way and the glass ball being exposed. The second case was that of a man of middle age, on whom the operation was performed in June, 1886, on account of blindness and pain caused by an intra-ocular growth. Healing was complete, but the patient returned in the following November with an opening and the ball exposed. I let it out, and allowed the scleral cavity, which was perfectly clean, smooth, and white, to collapse. In 1889 he came again, with the stump painful and irregularly distended. I then removed it, and found the distension to have been occasioned by an accumulation of watery fluid, which may previously, in all probability, have produced the yielding of the cicatrix. Even if the ball escapes, whether immediately or after a time, the condition of the patient is infinitely better and more comfortable than after removal of the eye. The stump formed by the collapsed sclera is not so good as that formed by the sclera with a contained ball, but it is in every respect far better than that formed merely by the collapsed muscles. The next best thing to the ball staying in is its coming out; and, except in the case last mentioned, I have never seen any collection of fluid in the scleral cavity, either when the ball was exposed or after it had escaped. I have never seen a single instance of "sympathetic irritation" subsequent to the operation, nor a single instance of "sympathetic ophthalmitis" in the sense of the definition above laid down; but I have seen four cases in which the previously sound eye has subsequently suffered from serious disease, and it may be worth while to describe them with some minuteness.

CASE 1.—A patient, between fifty and sixty years of age, came to me in November, 1891, with advancing cataract of her right eye and with general septic inflammation of the left, apparently the result of an operation for cataract performed a few weeks before at Wiesbaden, whence she had just returned. I performed Mules's operation with good effect, and the patient went to her country home, having arranged that she would come to me for the extraction of the right cataract as soon as this was sufficiently advanced. I saw her once or twice at intervals, her lens gradually becoming more opaque and her vision always corresponding in acuteness with the increasing degree of opacity. At length, in January, 1894, I received a letter saying that she had recently become practically blind, and asking me to fix a day for the operation. On her arrival in town I found the Mules's stump perfectly comfortable, and the right eye, except for the cataract, of perfectly normal aspect, its cornea bright and clear, the iris natural, the pupil mobile, and the conjunctiva healthy; but the perception of light and the projection were less good than they should have been or than the lenticular opacity would explain. The cataract was extracted with absolute surgical success—that is, with prompt healing and the restoration of a perfectly clear pupil; but the sight was very defective, and as soon as the ophthalmoscope could be used it became manifest that the optic nerve was passing into atrophy. The blindness has since become complete.

I confess that I cannot see my way in this case to connect the disease of the optic nerve with the Mules's operation. They may have been cause and effect, but there is no evidence that they were so, and, as it seems to me, very little probability. I have seen hundreds of cases of optic nerve atrophy, sometimes commencing in one eye and afterwards attacking the other, sometimes attacking both simultaneously or nearly so; but this was the only one of them in which Mules's operation had been performed. Unless we are to believe that the operation affords security against atrophy we must, I think, admit that the two events may occur independently in the same individual.

CASE 2.—A girl about eighteen years of age, of highly neurotic temperament and family history, and the subject of a very remarkable degree of habitual constipation, came to me in April, 1890, to ask me to remove her left eye, which had never had good vision, and had lately been destroyed by a succession of attacks of inflammation and ulceration of the cornea, attended by great swelling and thickening of the conjunctiva. After waiting a month to see the effect of treatment I performed Mules's operation on May 5th. All went well for a time, and the patient went to Yorkshire, where, a few weeks later, the right eye became inflamed. Being written to on the subject I advised, early in August, that Mr. Teale should be consulted, and he accordingly saw the patient. On Sept. 10th he wrote as follows: "The eye has proved troublesome and is not yet quite satisfactory. The trouble was essentially conjunctival, and at last became so severe that a peculiar œdematous patch appeared towards the inner canthus, and the neighbouring cornea became opaque, and, in fact, blistered. When everything else seemed to have failed I peritomised the conjunctiva and peeled off the affected surface of the cornea. The early result was good, the cornea healed, and the œdema of the patch of conjunctiva subsided. On the whole, the eye is better, but is still far from well, and is too intolerant of light." It is right to say that Mr. Teale added, "Can the stump of the Mules's eye be causing sympathetic ophthalmia?" I did not think so; and I may assume that if Mr. Teale had held this view at all seriously he would have performed or proposed removal. The patient improved and returned to town, but late in November had an attack of severe and intractable inflammation of the eye, with ulceration of the cornea, which was described to me as being precisely like the attacks by which the left eye had been destroyed. After a period of ineffectual treatment I put her under chloroform, thoroughly scraped the surface of the ulcer, irrigated the eye with mercurial solution, and then closed and immobilised the lids with a pad of wool, retained by adhesive strapping and a bandage. The dressing was not removed for a fortnight, when the eye was apparently well, the ulcer had healed, and the conjunctiva was free from swelling or abnormal vascularity. As a matter of precaution the dressing was re-applied for another fortnight,

after which the patient returned to her usual occupations. In a few weeks there was recurrence of ulceration, which again yielded to similar treatment, but which recurred again and again. At last I proposed to close the lids for six months, and for this purpose pared and united their edges, but before the period had expired the patient said that she no longer had perception of light. During the whole time of her illness the eye on which the Mules's operation had been performed never gave her a moment's uneasiness, and was never either congested or tender on pressure. She has continued to wear her artificial eye ever since, and seems hardly conscious of its presence

In this case it will be seen that the possibility of sympathetic mischief had been present to the minds both of Mr Teale and myself, and that, to me at least, the hypothesis appeared untenable. I should describe the case as one of corneal disease of peculiar malignity, probably neuroparalytic in its essential character, occurring in a very unfavourable subject, and attacking the two eyes in succession under the influence of some common cause. I cannot find any facts in the history which give the smallest colour to the notion of sympathy, at least in the sense to which I think the word ought to be restricted.

CASE 3.—A girl, about fourteen years of age, went to St. George's Hospital in January, 1887, her left eye being disorganised by chronic inflammation. A Mules's operation was successfully performed, although the patient was so unlucky as to develop scarlet fever a day or two after the operation. This did not interfere with the healing, and she was discharged with a well-fitting artificial eye. In October, 1895, she came to me with interstitial keratitis of the right eye, of the ordinary type and of considerable severity, which ran a very chronic course, and from which she is now making a better recovery than at one time I anticipated. There has never been any tenderness of the Mules's stump, and there has been nothing in the case of the right eye to distinguish it from hundreds of others in which no cause of sympathy could be indicated.

CASE 4.—A single woman, about fifty years of age, had double cataract, for which I operated successfully on both her eyes early in the "eighties." One of them afterwards became the subject of painful and complete glaucoma, and after some ineffectual treatment I performed a Mules's operation upon it in 1887. The remaining eye was attacked by glaucoma in 1894 and was eventually lost. There was nothing to suggest "sympathy" except that the events were consecutive in order of time.

It will be seen from the foregoing narrative that I have met with four cases in which, after the performance of Mules's operation, the remaining eye has been attacked by serious disease. It is remarkable that the four cases were totally unlike in their origin and nature, and that the diseases attacking the second eye were also totally unlike. It is remarkable that neither the ordinary phenomena of sympathetic irritation nor the ordinary phenomena of sympathetic ophthalmitis were exhibited in any one of them, and that in none of them was there any tenderness of the Mules's stump. In most of the cases of supposed sympathy occurring after the lapse of years it has been recorded that the eye by which the sympathy was excited had become tender or painful shortly before the sympathetic outbreak. I am strongly of opinion that if in my cases the eyes on which Mules's operations were performed had been removed instead the subsequent occurrences would have been precisely the same, except that no idea of sympathy would have been suggested. Moreover, it must be remembered that sympathetic ophthalmitis of the ordinary type is by no means unknown after removal of the eye. Many cases of the kind have been recorded, and one of the most recent of them may be found in the *Annales d'Oculistique* for the present year. The question raised by Mr. Cross is one which deserves all the observation and all the acumen which can be brought to bear upon it. On the one hand, the superiority of Mules's operation over removal is as great as the superiority of excision of a joint over the amputation of a limb; and, on the other hand, even this enormous advantage must not be conceded to patients if it be attended by any measurable risk of destructive changes in the eye which remains sound. My personal experience induces me to believe, with some confidence, that the risk is purely imaginary, or, at least, that it has no better foundation than the occurrence of a certain number of coincidences.

Harley-street, W.

ON THE VALUE OF ARSENIC AND BELLADONNA IN THE TREATMENT OF CHOREA.[1]

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DURING the summer of 1894 I had an opportunity at the Evelina Out-patient Department of testing the value of arsenic and belladonna in the treatment of chorea. I made notes of twenty-five cases the results of which I have briefly summarised.

CASE 1.—A boy, aged twelve years, had been suffering from chorea for three months. There was no history of rheumatic fever, but the father had been attacked by this disease. There were slight choreic movements of the face and eyes. The apex beat was perceptible in the fifth interspace, half an inch outside the nipple line, and there was a slight bruit audible in that area. Liquor arsenicalis in doses of twelve minims was ordered twice a day. After three days the twitchings were much improved, and after ten days they had disappeared.

CASE 2.—A boy was suffering from a fourth attack. The chorea was slight and limited to the left side, the apex was situated in the fifth space, and there was a long and loud presystolic bruit. Twelve minims of the liquor arsenicalis were prescribed three times a day. After seven days the movements had entirely gone, and oleum morrhuæ with vinum ferri was substituted.

CASE 3.—A girl, aged eight years, suffered from an attack two years previously. There was no history of rheumatic fever, and no cardiac murmur was discovered. There were twitchings of the face, tongue, and eyes. Liquor arsenicalis (10 minims) with bismuth mixture—a combination of subnitrate, tragacanth, and peppermint water—was given twice a day after food. Three days later the dose was increased to 15 minims. This dose, however, was followed by sickness, and a crop of herpes appeared on the lips; it was therefore diminished to 10 minims. After taking arsenic for fourteen days no visible improvement was apparent; consequently the drug was stopped, and tincture of belladonna was tried instead in doses of 15 minims three times a day, along with a carminative. After taking this drug for seven days the movements had disappeared, and tonics were administered in its place. The patient took phosphate of iron for fourteen days and was then discharged, as she had not exhibited any movements during that interval.

CASE 4.—A boy, aged seven years, had exhibited choreic twitchings for a period of three weeks. There was no cardiac bruit and no history of rheumatism, but of fright. After taking arsenic (10 minims) for ten days there was no amelioration. At the end of that time, also, he was sick after each dose, and an acute herpetic eruption with œdema of the right ear appeared. Tincture of belladonna in 20-minim doses with bismuth mixture was ordered every four hours during the day. On the fourth day the movements were decidedly better; after seven days they were no longer present and no toxic effects were observed.

CASE 5.—A girl, aged twelve years, was suffering from the eighth attack. There were now moderate choreic movements of the extremities and tongue which had existed for five weeks. Arsenic in 15-minim doses was prescribed three times a day. There was no cardiac bruit, but the heart's action was markedly irregular. After three days the movements were, if anything, worse; there was some soreness of the eyes and nose, with diarrhœa. Tincture of belladonna (20 minims) along with potassium bromide was ordered every six hours. After four days the movements were much improved, the hands could be held out perfectly still, and only twitchings in the left arm and face were left. The speech was good and the pupils, as is generally the case in chorea, were slightly dilated, but they reacted to light and accommodation. After a week the movements had quite gone. The pupils were then very wide and reacted but slightly to light.

CASE 6.—A girl, aged eleven years, had exhibited frequent and irregular movements of the left arm and leg for a week. There was no history of acute rheumatism, but her father

[1] A paper read before the North Tottenham Medical Society, Nov. 5th, 1896.

and brother had suffered from it. She was very anæmic; the apex beat was situated in the nipple line, and there was slight hypertrophy of the left ventricle. Whenever the limbs were thrown into spasmodic movements the heart's action at the same time became markedly irregular. She was ordered 15-minim doses of liquor arsenicalis twice a day. The movements gradually improved, but at the end of three weeks she still complained of much sickness of an evening and of abdominal pain after food. Belladonna, in the form of the tincture in 15 minim doses, with mistura carminativa, was substituted. A week later the movements became *nil* and did not reappear.

CASE 7.—A girl, aged eight years, had a fright three weeks previous to admission to hospital. There were movements of the hands and tongue. The heart sounds were normal, but the cardiac movements became irregular when the jerks occurred. A week's treatment with arsenic only appeared to aggravate the condition; she complained also of sickness, headache, and of an eruption around the mouth. Tincture of belladonna in 15-minim doses with peppermint water was prescribed instead. After a week the note read: "No vomiting, no headache, movements the same, pupils normal, herpes drying up." After three days' further treatment the movements were vastly improved, and after fourteen days had completely disappeared.

CASE 8.—A girl, aged eleven years, was suffering from a second attack, which was apparently the result of an examination at school. The left face and tongue were particularly affected. After three days' treatment with arsenic diluted with cinnamon water the eyes and nose became very sore, and tincture of belladonna in 10-minim doses was ordered three times a day in place of it. After three days the movements had subsided considerably, and after ten days' treatment the movements were extremely slight. She complained of blisters in the mouth and of a sore throat. Oleum morrhuæ with vinum ferri was now ordered instead. It is advisable, especially in the case of out patients, to discontinue the arsenic and belladonna as soon as the movements become insignificant, and then to give tonics in order to complete the cure. The remaining cases were much of the same character, and illustrated in the same manner the efficacy of these drugs.

During the last year eight cases of severe chorea, including one of chorea insaniens, have been admitted into the Tottenham Hospital. Condensed notes of three of these read as follows:—

CASE 9.—A boy, aged ten years, was admitted on Feb. 8th, 1897, with extensive choreic movements affecting all the muscles of the face, arms, and shoulders. Contractions of the sterno-mastoids caused him to turn his head from side to side. He had spasmodic and very violent movements of the trunk. Breathing and swallowing were unaffected. The heart's action was rapid, the pulse 90, but there was no murmur. A mixture of 30 minims of tincture of belladonna, and 6 minims of liquor arsenicalis, with mistura bismuthi, was prescribed every four hours. On the 11th he became a little quieter, slept during the day for a few hours, and well at night. He took food well. On the 12th he was much quieter, but if observed the movements became exaggerated. On the 13th he was much better; most movement was now to be seen in the lips and tongue. The first sound was reduplicated at the apex. There was some swelling of the parotids, and the urine measured 12 ounces. Potassium acetate in 5-grain doses was added to the mixture. On the 14th he was decidedly quieter, and the urine measured 18 ounces. On the 16th he was very much quieter, and no oscillations occurred unless he attempted to move. The urine amounted to 16 ounces. Syrup of phosphate of iron was now ordered and the arsenic and belladonna were discontinued.

CASE 10.—A girl, aged seventeen years, was an out-patient with chorea twelve years previously. She was frightened in February by a carriage accident, but no movements were perceptible until April 8th. On admission on April 14th she was exceedingly violent and restless, and the movements affected the limbs chiefly. The temperature was 99 2°F. On the 15th a mixture of 30 minims of tincture of belladonna, 6 minims of liquor arsenicalis, with bismuth mixture, was administered every four hours after food. On the 20th the movements had entirely disappeared. Massage to the arms was commenced and cod-liver oil with phosphate of iron was prescribed instead.

CASE 11.—The case of chorea insaniens occurred in a girl, aged fifteen years, with a history of rheumatism at the age of five years. The movements commenced about five days before admission. The knee-joints were swollen. At the height of her violence chloroform was administered; she was taking belladonna for three days before, and subsequently for a week. At the end of this time she could walk, and all movements had ceased.

When estimating the value of a drug much care is required, and especially is this the case in chorea, since the natural tendency is towards recovery after about seven weeks, even if no treatment at all is adopted. If a drug is prescribed, and after a few weeks' perseverance it is found to be of no benefit, it is natural to seek a change, and the latter drug may receive the credit of the cure, which might have followed even if no drug had been administered. The observation of the cases here mentioned gives one the impression, however, and this is also generally acknowledged, that large doses of arsenic have a beneficial influence in subduing the movements, and this is best seen after the movements have existed for some time—weeks or months—that is, when a cure seems almost hopeless. The drug should be given after food, and the little patient should lie down for half an hour afterwards in order to avoid retching and sickness. Whilst looking up the literature I found a paper by Dr. Fuller, in the *Medical Times* of July 1st, 1859, on the Treatment of Choreic Patients by Belladonna. He gave large doses of the drug in twelve cases. One girl aged ten years, received 70 grains of the extract daily, the average dose for an adult being half a grain. She took 1000 grains in twenty-six days. Another took 37 grains of atropine in eighteen days, the average dose for an adult being one-fiftieth of a grain. During the administration neither fever, rash, nor erythema was noted. The pulse became quick and the urine scanty. Only in two instances was indistinctness of vision observed; four suffered from sickness and diarrhœa. There was no dryness of the throat, no headache, and no delirium. In two patients the belladonna was useless; in the remainder its efficacy was noteworthy. The drug was readily absorbed from the stomach and passed out in the urine, from which it could be extracted. The phenomena of chorea appear to be due to a nutritive and functional disturbance or ataxia of the higher nerve centres. Post mortem a general tendency to dilatation of the smaller arteries within the substance of the brain accompanied with exudation is observed. This appears more especially in the corpus striatum and the regions supplied by the middle cerebral arteries; in other words, there is pronounced hyperæmia of these nerve centres. It is probable that the chief stress falls upon the Rolandic areas. Such vaso-motor ataxia might be induced by reflex disturbances arising within the digestive tract, by uterine irregularities, or by emotional disturbances. In the rheumatic diathesis the toxin may attack the motor centres directly.

It is, perhaps, permissible to make the following remarks in conclusion:—1. Belladonna appears to be most beneficial in recent cases, and its influence is sometimes very marked in severer forms. 2. In obviously rheumatic cases arsenic in large doses may be given a trial or may be combined with belladonna from the first. Belladonna may act by diminishing the excitability of the nerve centres or by imparting an improved tone to their vascular supply. 3. In the wards of a hospital it is perfectly justifiable to give to a child as much as 30 minims or more of tincture of belladonna every four hours for ten days or even longer. Certain precautions are necessary. The patient should be kept in bed and the urine should be daily measured. Small doses of potassium acetate may be added if it become much diminished or if the eyelids show any puffiness. In one child nocturnal incontinence occurred, and the dose was lessened. The occurrence of the papular erythema, which leaves raised circular lumps for a time, does not necessitate any diminution of the dose. Dryness of the throat and swelling of the parotids, should they occur, are merely temporary. The influence of the belladonna makes itself felt after about four days. Should no visible improvement occur before the tenth day it would be useless to continue with it. But in all the eight severe cases already referred to belladonna was of benefit, and is certainly worthy of further trial. As soon as the movements become trivial or occur only during exertion it is better to omit the belladonna, to commence massage of the affected muscles, and administer cod-liver oil and syrup of phosphate of iron or other tonics. The arsenic may be continued for a week or longer. For permission to publish the cases seen at the Evelina Hospital I am indebted to the courtesy of Dr. Soltau Fenwick, assistant physician to the hospital.

Edmonton.

VITALITY.[1]

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VII.—THE INTERSTITIAL CIRCULATION IN ALL LIVING THINGS.—ITS DEPENDENCE ON VITALITY.

INTIMATELY associated with the matter of every living particle is water. Indeed, water is a constant and necessary constituent of all life. Its amount is considerable in proportion to the solids wherever vital phenomena are active. Living matter without water has probably never existed, and anything approaching desiccation results in death. Water, then, must be regarded as an absolutely necessary condition of life at all times, but the smallest amount that may be present without life ceasing has not been determined. As far as I have been able to ascertain, no evidence yet obtained supports the conclusion that life in the complete absence of moisture is possible, and it seems almost certain that water must have preceded the existence of any form of life.

Life involves the very free movement not only of material particles but of the constituent atoms of the living matter, many of which are being continually rearranged—placed in new positions with respect to one another. There is no such thing as a living particle having the same composition in every part, or remaining of the same composition from moment to moment. An isolated living atom of any substance in nature is not conceivable.

Whether the atoms are caused to move in the water in which they are suspended or are in some sort of chemical or other kind of combination with the elements of the water cannot be decided at present. The atomic movements and rearrangements here referred to are *vital movements*, but are, of course, invisible and not to be demonstrated; but the general movements so characteristic of living matter are well known, and can be studied without difficulty in the amœba, in the colourless blood corpuscles, in pus and mucus corpuscles, and in many other particles of living matter or bioplasm; and these movements of living matter differ in essentials from every kind of movement known to take place in matter in any other state or condition, and are vital—that is, peculiar to, and characteristic of, life—the temporary living state of matter.

Not only is water necessary to living matter, but the fluid which bathes the living matter and the substance immediately around it must be continually changed. It is probable that neither the particles of living matter nor the fluid around it are ever in a state of rest—stagnation of fluid like the cessation of movement in living matter being immediately followed by death.

In all living forms there is evidence of the free and constant movement of interstitial fluid, and in organisms of complex structure consisting of tissues as well as of living matter the fluid is not only present in the living matter itself, but pervades every part of all the moist tissues, circulating freely among the structural elements, and keeping these in a state of health and activity. In some cases there are actual canals which are bounded by a thin layer of the tissue and thus separated from one another; in others the fluid pervades every part of the tissue, occupying minute interstices, which vary much in dimension and arrangement in different tissues, and in the same tissue at different ages. The free movement of fluid is, in fact, always taking place in living forms, whether there are true vessels arranged as a network of tubes in every part of the organism, or propelled by a special organ into large vessels directly connected with it, and so into smaller ones resulting from the division and sub-division of the trunk and its branches, and thus distributed to all parts. The free circulation in the living matter and in the interstices of the tissues is universal, and is one of the phenomena belonging to life itself. It is an "interstitial circulation," always independent of any propelling organ or power, or capillary attraction, adhesion or any motor action known in connexion with the non-living.

This unceasing movement and interchange of fluid which takes place in the minute channels and interspaces between the microscopic elements of the tissues as well as in every kind of living matter is a necessity of life, and has been universally present in all things that have lived, including the most minute speck of independent living matter and the most gigantic and highly complex organisms. The interstitial circulation goes on even in the so-called non-vascular tissues which may be situated some distance from any vascular supply—from any blood- or lymph-carrying vessels. Even in the hardest textures, such as bone, and teeth, and shell, the circulation of interstitial fluid continues as long as any living particles, however minute, which have taken part in the formation of the tissue, remain. When tissue becomes hard, and dry, and inactive, there is, of course, no longer circulation of fluid in its interstices, and all changes indicative of life have ceased; and though still connected with and, in fact, forming part of a living organism, the tissue is no more living than if it had long been completely severed and preserved for many years in a museum. Through the agency of the interstitial circulation all nutrient matters after passing through the formed material are brought into close proximity with the particles of bioplasm that are to appropriate them, which living particles are concerned in the development, formation, and action of the respective tissues or organs. By the interstitial circulation the deterioration of tissue may be prevented, and damage which it may have sustained repaired. Abnormal formations and deposits may be removed through the circulation of the interstitial fluid, and may be taken up by it, changed, and dissolved. Although entirely independent of the organs of circulation and of any propelling power, mechanism, or apparatus, some of the interstitial fluid with its dissolved constituents is continually passing through the capillary walls where capillaries exist and mixing with the blood, some of its components taking part in nutrition while others are altogether removed from the organism by the action of various excreting organs.

The interstitial circulation of man and the higher animals is active long before the organs of circulation or the fluid to be propelled through the vessels exist, and before any vestige of the complex arrangement of nerve centres and fibres which regulate and control the blood circulation can be discerned. In fact, the ordinary circulating organs may be said to be subordinate and to minister to the interstitial circulation, and would have no meaning in the absence of the latter, which begins at the earliest period of embryonic life and before any structures or organs have appeared. The interstitial circulation never ceases as long as life lasts, and continues for a time after the heart has ceased to beat and the blood to circulate. In various pathological changes detrimental to some of the tissues and organs of the body of *vital importance* the interstitial circulation may still be carried on, but in its absence, development, nutrition, formation, repair, action, and the removal of the products of disintegration and decay would be impossible.

That "death" occurs when the heart stops beating and the blood ceases to circulate is certainly true with regard to the high and complex phenomena which characterise man and the higher animals, but some vital actions continue to be manifested in certain organs and textures after death in the ordinary sense has taken place. The formation of hair, nail, bone, and some other structures may continue for some time after death. In short, although the bioplasm of certain parts has ceased to live, that of certain tissues and organs of the body may retain its vitality for some time, which varies according to circumstances. The bioplasm concerned in the higher operations of the brain and some other parts of the nervous system may indeed be dead, while other forms of bioplasm continue to live, and for different periods of time after "death." In man and the higher animals the forms of living matter dying first are more dependent upon the steady supply of nutrient matters and the immediate removal of the products formed during their vital changes than the bioplasm taking part in the formation and action of simpler tissues and organs, and probably "die" the instant the interstitial circulation in them ceases to be carried on at the normal rate. "We" die some time before the death of many of the living particles taking part in the formation and action of some of our tissues occurs. In certain cases, as is well known, the multiplication of particles of bioplasm (leucocytes) continues for some time after death, and is associated with a rise in the temperature of the whole body amounting occasionally to three or four degrees during several hours after the blood circulation has

[1] Nos. I., II., III., IV., V., and VI. were published in THE LANCET of Feb. 22nd, April 11th, June 13th, Aug. 29th, Oct. 17th, 1896, and Jan. 23rd, 1897, respectively.

ceased for ever. It must, however, be borne in mind that every form of bioplasm belonging to the organism has been derived by direct descent from one minute living particle.

(To be continued.)

NOTES ON SMALL-POX, VACCINATION, AND RE-VACCINATION.

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THE value of vaccination and re-vaccination in preventing and diminishing both the prevalence and mortality of small-pox must be to members of the medical profession a matter of experience. In the following notes I have given mine for what they are worth. If other practitioners would give theirs it seems to me that valuable additional material might be added to that already furnished by the report of the Vaccination Commission.

During my student career, 1860–65, I only saw one case of small-pox, and that a doubtful one, though I saw many cases of typhus, typhoid, and scarlet fevers, measles—in short, all the other exanthemata. Liverpool at that time was a hotbed of typhus fever, its victims comprising many medical practitioners, young, old, and middle-aged; now there are middle-aged physicians who have never seen a case of typhus fever, it being so comparatively rare. But ought not small-pox to be equally so? In the spring of 1866 I was assistant to Mr. G. C. Holt, who was then practising in Tunstall, Staffordshire. During the three months I remained with him I saw many cases of small-pox, which was then very prevalent, and the cause was very easy to find. Not only was vaccination much neglected, but it was very inefficiently performed, the public vaccinator yielding to the wishes of the mothers and only producing two, or at the most three, vesicles. As the neighbourhood was a great one for tramps nothing could be easier than the importation of the disease. I saw several cases of the confluent form ending fatally. What surprised me most was the perfect indifference of the inhabitants to such a scourge, the child, either unvaccinated or only very imperfectly protected by it, being allowed to play about in the room in which the father lay a ghastly object even for a surgeon to behold; but all remonstrances were vain. For myself I felt no fear whatever, having been not only efficiently vaccinated in infancy (the marks of which were then quite distinct), but having also been re-vaccinated eight years previously during an epidemic of small-pox in Liverpool. This was so successful as to convince me even then that vaccination in infancy, however efficiently performed, can only be regarded as a protection up to puberty, and possibly to the age of twenty-one years, but not later. At the time of which I am writing re-vaccination was almost unknown in Staffordshire and elsewhere in England. During the rest of this same year, 1866, I was in Birmingham as one of the resident surgeons of the lying-in hospital in that town. Though my duties took me into the very worst and poorest parts of the town I neither saw nor heard of any cases of small-pox, and I learned incidentally that vaccination was most efficiently performed there. During the year 1867 I resided in Burford, Oxon., as assistant to Mr. T. H. Cheatle, who had been practising there for some years. I am glad to state that he still practises there, occupying a very honourable position both among his professional brethren and the residents of his native town, in which he has practised for more than forty years. Shortly before my arrival at Burford a fatal case of small-pox had occurred at one of the neighbouring villages, which was the subject of conversation. It formed an addition to the illustrations of panic and selfishness which have so often distinguished the conduct of people during the prevalence of small-pox. Instead of the indifference I had seen in Tunstall the farmers and other employers of labour had such a dread of the disease that they refused to allow any of their labourers to go near the house wherein the infected man lay, while at his death the relieving officer was obliged to take men from Burford, a distance of three miles, to put the body in the coffin. In consequence of this and other warnings elsewhere vaccination was vigorously pushed, instructions being to vaccinate in three places on each arm, I having been taught to do the same in four places at the vaccination station in Tottenham-court-road, London, two years previously. It has the advantage of securing marks on both arms as well as the thoroughly efficient vaccination of the infant. But I have never seen it done since, and it seems to me that four good marks on the left arm are sufficient for all practical purposes. No other case of small-pox occurred in or near Burford during the year.

When I began practice in Liverpool at the end of 1868 I assisted the late Dr. Steele, Dr. Lodge, and Dr. Roger Parker in their vaccinations. At that time a large number of vaccinations were performed yearly by the surgeons of the Ladies' Charity, of whom Dr. Steele was one, it being a rule that no woman should have the benefit of the charity in a subsequent labour unless the child had been vaccinated. Later the consolidation order took effect, the vaccinations at the Ladies' Charity ceased, and three public vaccinators performed the vaccinations formerly done by the twelve district medical officers. Dr. Lodge was the public vaccinator for Everton, a very large district. A Welshman himself, he used to say that Welsh women gave him the most trouble in demanding to have their infants vaccinated in only two places, and I have seen him show them triumphantly a child with six, or even nine, multiple vesicles on the arm, without any more areola or constitutional disturbance than in those who had only four. I had very good opportunities of seeing the various forms of vaccination by grooved needle, by parallel incisions, by parallel scratches, and by simple punctures. On the whole I have found the parallel scratches, as recommended by Dr. Seaton and Dr. Renner, the most satisfactory. It was somewhat remarkable that soon after the new arrangements had been made and that vaccination had been most rigorously enforced we should have been visited by a very severe epidemic of small-pox. I was then one of the district medical officers, my district comprising some of the worst parts of Liverpool. A great improvement has taken place in it since, whole streets having been removed and houses of a much better class built on the sites. I saw a very large number of cases, some of them being of the most severe confluent form. Abler pens than mine have dealt with this epidemic, and I will limit myself to what came under my own notice. We had not then the Public Health Act of 1875, and had only limited powers as to the removal of patients to hospital and of corpses to the mortuary. I have a very vivid recollection of attending a man day after day lying in the room where also lay the dead body of his child—a victim to the fell disease. I remember, also, how when the disease was at its height men and women invaded the vaccination stations in hundreds and thousands to secure re-vaccination, which to not a few was really primary vaccination. Careful note was made as to vaccination marks in all those who were admitted into hospital, the result being to confirm all the various and subsequent experience of the value of vaccination in reducing the number of those infected and the virulence of the disease. At length, when the re-vaccinations had continued for some time and a very large proportion of the whole population was fully protected, the epidemic ceased, just as it did more recently both in Warrington and in Gloucester. Since then we have had cases of small-pox now and then, and not long ago there was a sufficient number to cause a scare. But thanks to the notification of each case and to the prompt measures taken by Dr. Hope, the medical officer of health, to ensure immediate removal to hospital when this was possible, and isolation when it was not, as well as to the prompt vaccination of infants and re-vaccination of adults, the disease was prevented from spreading. In such a city as Liverpool there must in the very natural course of events always be a very large number of infants under the age of three months, which, added to others not vaccinated from other causes, furnishes a considerable number of unprotected children, among whom a case might be imported at any time.

And re-vaccination is by no means so generally adopted as it ought to be. In 1877 I was appointed surgeon to the Liverpool police force, one of my duties being to examine all candidates for the force. I was struck with the circumstance that excepting those who had been in the army or Royal Irish Constabulary hardly one had been re-vaccinated, while in not a few men there was an entire absence of any vaccination scars. I found that it had been the practice previously to re-vaccinate the whole force in times of small-pox epidemic. But it

seemed to me much more desirable that each candidate, after being found fit to be admitted into the service, should be re-vaccinated (unless this had been previously done) before commencing his duties. Now, as everyone knows, police officers are very apt to be brought in contact with small-pox patients exposing themselves in the streets before they are cured, or detained at a railway station or other public place. Most important is it, therefore, that every police officer should be thoroughly protected by vaccination and re-vaccination. About ten years ago my late colleague, Dr J. S. Clarke, and I examined the arms of all members of the force. We found that very few had been re-vaccinated, and that many had no marks whatever. We recommended that the whole force should be re-vaccinated and that every candidate should be re-vaccinated before admission if the examining surgeon found this to be necessary. Our recommendations remained disregarded until the beginning of the year 1895, when the Watch Committee resolved that every officer then in the force should be re-vaccinated by the examining surgeon, but that this should be voluntary on their part. The committee also resolved that every candidate should be re-vaccinated before admission if the examining surgeon deemed this necessary. This is the rule enforced in the Royal Irish Constabulary and in the Metropolitan Police Force, London. It seems to me worthy of adoption in every police force, whether large or small. For until it has been a rule absolute re-vaccination will never become general. Only thirty-seven constables came to me voluntarily to be re-vaccinated, while 176 men who have joined the force since 1895 have received certificates from me of successful vaccination. They being men between twenty-one and thirty years of age present marks of very efficient primary vaccination. But I generally find excellent results of re vaccination, both in those vaccinated by their own surgeons and by myself. I always use calf lymph, and endeavour to secure two good marks. In the course of ten or twelve years every member of the Liverpool police force will have been re-vaccinated, and though it is to be wished that this very desirable regulation had been effected before, it is very satisfactory that it has been done now. The chairman and members of the Liverpool Watch Committee as well as the Head Constable deserve great credit for bringing about so very desirable a reform, which was not effected without considerable opposition.

I cannot help thinking that if every individual member of the profession did his best in his individual and professional capacity to promote re-vaccination in his household and among all with whom he is brought professionally in contact we should very soon hear the last of small-pox epidemics and anti-vaccinationists. I have given my experience for what it is worth, but there must be many practitioners in town and country who can give even more convincing proofs of the value of Edward Jenner's work, accomplished so happily 101 years ago.

Liverpool.

SUBCUTANEOUS EMPHYSEMA FOLLOWING LABOUR.

BY CHARLES D. MUSGROVE, M.D. EDIN.

ALTHOUGH the above condition is by no means rare it is sufficiently uncommon to be worth recording, the more so in this particular case on account of a peculiarity in the onset of the symptoms.

A primipara, aged twenty-two years, was confined on May 22nd, 1897. The presentation was left occipito-anterior and the labour a natural one, except that it was somewhat prolonged, especially in the later stages, owing to the large size of the child's head. From the time when the head had descended low enough to be visible at the vulvar opening it was nearly an hour before delivery took place, and during this period the pains were violent and almost constant, whilst the patient, who was strong and well built, exerted herself to the utmost in holding her breath and bearing down forcibly. After the head was expelled, which occurred at 6.30 P.M., the remainder of the labour was satisfactory. During the night the patient rested quietly, with intervals of sleep, until 4 A.M. when she was seized with a pain at the left side of the trachea about an inch above the sternal end of the clavicle. This continued for an hour, after which it passed off almost as suddenly as it had come on. Neither at this nor at any other period in the progress of the case was there any dyspnœa. When I saw her at 10 A.M. she had no pain or discomfort, her breathing was quiet and natural, and her temperature was 98° F., but her pulse was intermittent and irregular, though not rapid. On examination over the part indicated by her as the seat of the pain, which had occurred at 4 A.M., no swelling or tenderness was found, but in each supra-clavicular region and over the whole of the front of the chest there was felt and also heard on palpation marked emphysematous crackling of the subcutaneous tissues. The percussion note over the whole extent of the lungs was normal in character, and the lung sounds were distinctly heard, so that there was evidently no pneumothorax present.

Taking into consideration the fact that the emphysema of the subcutaneous tissues occurred within fifteen hours of the termination of labour, it is evident that rupture of one or more vesicles of the lung had taken place owing to the severe and prolonged straining during the hour preceding the expulsion of the head, and that the air having been effused beneath the visceral layer of the pleura, and probably also between the lobules of the lungs, had found its way to the mediastinum and thence to the neck. It is to this latter part of its course that I desire specially to draw attention, as offering a feasible explanation of the attack of pain, which formed the onset of the symptoms. It is evident that in the mediastinum air which has been effused from the lungs must be on the outer aspect of the pericardium, and therefore outside that layer of fascia, which is continuous with the fibrous layer of the pericardium, and which, as it is traced upwards, is found to invest the trachea and thyroid gland. Its readiest mode of passage from the chest to the neck would appear to be through the looser tissue lying at the back of the sternum, and if so it would make its way upwards on the inner aspect of the fascia, which is attached to the posterior aspect of the sternum, and which is continued upwards to invest the depressors of the hyoid bone; in this case a conclusive proof was afforded that this was the course which the air had taken, for on applying a stethoscope over the upper part of the body of the sternum a distinct crackling was heard with each beat of the heart, of which only one explanation is possible, viz., the presence of air in the loose tissue lying behind the bone. Taking these facts into consideration there seems every probability that after the air had reached the neck it lay between two layers of fascia, a posterior covering the trachea and an anterior investing the sterno-hyoid and sterno-thyroid muscles, and it is to the pressure of the air as it was gradually forced up from the chest into this compartment that I would ascribe the attack of pain in the neck, for whereas the entrance of the air from below would be comparatively easy, its escape from the compartment in which it would find itself would be a matter of considerable difficulty; in fact, it appears to me that there would be only one way of escape—viz., by forcing itself through the anterior wall of fascia at the point where the latter is pierced on each side by the external jugular vein. It may have been that while the patient was asleep this vessel was somewhat engorged owing to the position of her head, thus preventing the escape of air alongside of it. If this assumption be correct it can readily be understood that the pain due to the stretching of the fascia by the increasing volume of air behind it having awakened the patient, the movements of the latter, by varying the amount of blood in the vein, would tend to facilitate the escape of the air, thus accounting for the disappearance of the pain. The air, having once reached the subcutaneous tissues, would, of course, be able readily to diffuse itself over the neck and chest.

Of the further progress of the case little remains to be said. The crackling produced on palpation gradually became less marked, until on the seventh day it had disappeared, whilst that heard with the beat of the heart continued for two days longer, after which it also ceased, so that by the tenth day the whole of the effused air had evidently been absorbed.

Penarth.

THE Queen has been graciously pleased to accept the original copy of Surgeon-Lieutenant Colonel John MacGregor's Jubilee poems entitled "*Victoria Maxima et Victoria Regina*." A cover was specially designed and embroidered by Mrs. MacGregor.

A METHOD OF OBVIATING RECURRENCE AFTER OPERATION FOR SYMBLEPHARON.

BY KENNETH SCOTT, F.R.C.S. EDIN.

THE circumstances under which this special form of treatment was called for occurred in a peculiar case, very similar to some others which I recently had occasion to describe,[1] in which there were adhesions between the cornea and palpebral conjunctivæ due to a specified cause. The patient was an Egyptian peasant, twenty-seven years old, and of strong, healthy constitution. He acknowledged having suffered from inflammation of his left eye some six months previously, and having then employed a white "sheeshm" for its cure. White "sheeshm," as I have elsewhere stated,[2] is a dry powder, usually composed of powdered alum, calomel, sugar, and flour, and is one amongst a variety of others employed by the lower Egyptian peasant class as a dry collyrium, which is introduced inside the eyelids when there is inflammation of the eye; needless to say the result is usually more harmful than beneficial. The patient's left eye when I first saw it presented a slight ptosis, which, on closer examination, was found to be caused by the upper eyelid and cornea being firmly adherent to each other. The point of junction between the two surfaces was restricted to a spot, about 4 mm. in area, situated on the outer third of the horizontal diameter of the cornea. The band of connexion was fleshy, very short, and corresponded in girth to the size of its corneal attachment. The introduction of a tenotomy hook demonstrated that the adhesion was strictly limited to this one point. During the operation I rendered the band tense with a tenotomy hook and then carefully dissected it off from the cornea with an angular keratome. I also find this knife convenient to use for a similar purpose when operating on cases of pterygium. In the dissection I was careful to remove a very slight thickness of the anterior corneal layers, so laying bare clear corneal tissue and also making certain that no opaque débris of cicatricial tissue should be left behind. I then everted the upper eyelid and with scissors removed the remainder of the band. I have always found it very difficult to keep any form of dressing or other material in place which has been introduced temporarily with the object of keeping the two opposing conjunctival surfaces apart during a process of healing. There were no thin glass shields at hand which might have answered this purpose, but which have also the disadvantage of, to a certain extent, acting as foreign bodies under the eyelids. In consequence I was compelled to devise some other means for attaining my object, and succeeded by everting the upper eyelid and stitching its ciliary edge in that position to the eyebrow. The sutures employed were of very fine silver wire, as that material seemed to be the best for the purpose, being recommended by its complete pliability, its being so readily fastened by twisting, and, if necessary, being undone and readjusted; it was also recommended by the thorough way in which it can be rendered aseptic. The patient's eye was now treated as a case of extensive corneal abrasion. Atropine was instilled, and a plain dressing with vaseline and a sprinkling of dermatol was kept applied to the eye. The healing of the denuded portion of cornea was carefully gauged each day by the use of fluorescin, and when the process was completed after the lapse of four days the retaining sutures were removed.

I have similarly applied the principle of this method with marked success in a case of symblepharon posterius, in which class of cases—contrary, I believe, to general usage—I always remove flaps of bulbar conjunctiva and attach them by buried sutures to the inner surface of the eyelid, as I find by experience that the recuperative power of a denuded portion of the bulbar conjunctiva is much more speedy and satisfactory than that of a corresponding area when situated on the eyelid; besides, by attaching the flaps to the bare inner surfaces of the eyelids any tendency to cicatricial contraction is avoided, which might otherwise lead to subsequent inversion of eyelashes, &c.

The small detail of operative procedure described above may possibly have been used by other surgeons, but as hitherto I have not found mention of it I may perhaps be allowed to recommend it on account of its great simplicity, efficiency, and practical painlessness. The cornea is protected by the dressing from extraneous influences, and has every opportunity of healing uninterruptedly, thus avoiding one of the chief causes of anxiety which the surgeon has frequently to encounter in these cases.

Cairo.

[1] Ophthalmic Review, vol. xv., p. 77.
[2] Ibid.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CONGENITAL CYST OF THE NECK OF DOUBTFUL NATURE.

BY P. CLENNELL FENWICK, M.B. LOND., M.R.C.S. ENG., L.R.C.P. LOND.

MR. G. E. DEAMER recently delivered a patient of a healthy male child and immediately noticed a tumour on the right side of the neck. He asked my opinion of its nature, and I have thought that a note of the case might find publication in THE LANCET.

The tumour was at birth of the size of a large chestnut, and was situated between the sterno-mastoid and thyroid body—limited sharply above by the lower jaw, and showing several swollen veins running over its surface. The anterior border of the sterno-mastoid overlapped it. At five weeks old the tumour was swollen (about the size of a large walnut) and was lying close to the thyroid gland, while between it and the gland a hard, round cord could be defined, apparently attached to the right lobe of the thyroid and to the back of the growth. The swelling was hard and round, and felt like a tense cyst. There was distinct pulsation perceptible to the eye, and the cyst moved up and down on swallowing. When the child cried it increased in size, but returned to its original dimensions when the infant was quiet.

The diagnosis of the growth is obscure. Owing to its close communication with the thyroid, its entire mobility and its rapid variation in size, I was inclined to think it was an unobliterated branchial cleft, but I was unable to account for the pulsation, which was certainly *not* transmitted from the underlying vessels.

As neither Mr. Deamer nor I have seen an exactly similar case we should be glad of any assistance in arriving at a correct diagnosis, for which purpose, with his permission, I send this note.

Christchurch, New Zealand.

A CASE OF UTERUS BICORNIS.

BY JAMES B. TOMBLESON, M.B., B CH. OXON.,
SENIOR OBSTETRICAL HOUSE PHYSICIAN, ST. THOMAS'S HOSPITAL.

I HAVE recently had under my care a case of uterus bicornis, with gestation in one horn, which I think worth reporting. The patient was being attended in her confinement by an obstetric clerk from St. Thomas's Hospital, who sent for me as he thought that the case was a curious one of twins. On abdominal examination I found a large, almost symmetrical heart-shaped tumour, reaching on each side nearly up to the costal margin. There was a deep central sulcus separating the two halves, of which the right was rather larger than the left. I decided that probably a fœtus lay in each half of the tumour, which I had no doubt was the uterus, and as the pains were not very numerous or powerful I left the patient, resolving to see her later. Some hours

later the obstetric clerk sent for me, stating that a child was born and that he believed a second one was present, lying transversely across the pelvis. I found on examination of the abdomen that in place of the earlier tumour a much smaller one was now to be felt lying across the lower part of the abdomen. In the middline it reached three inches above the symphysis pubis. The most prominent part was a round, firm mass in the right iliac fossa the size of a cocoa-nut, and from this the mass gradually tapered away towards the left iliac fossa, where it was about two inches thick. As a result of this examination I thought the clerk was probably right, and prepared to do internal version under an anæsthetic. On getting my hand into the vagina (the insertion of the whole hand was necessary as the cervix was very high up) I found that the uterus contained only the placenta and some blood-clot. I made a careful examination, and found that the uterus consisted of two horns, which united only at the cervix. Of these, the right was capacious and had evidently contained the fœtus, while the left was much smaller in calibre, admitting two fingers for a distance of two inches and one finger for three and a half inches. The placenta was detached when the examination was made, but from its position had probably occupied the left cornu. No septum was to be felt on either anterior or posterior wall of the cervix. On inquiry I learned that the patient had been confined twice previously, that on each occasion the child was premature (in this case early seventh month), and that on each occasion, too, an erroneous diagnosis of twins had been made by the attending practitioner. In this latter fact, it seems to me, lies the chief interest of the case, and it is in the hope that my account of this case may prevent others from making a similar mistake to my own, that I have ventured to send this report.

Albert Embankment, S.E.

A NOTE ON THE TREATMENT OF HEART DISEASE BY THE ADMINISTRATION OF BARIUM WATERS COMBINED WITH THE NAUHEIM SYSTEM OF BATHS.

BY W. BLACK JONES, M.D., B.S. LOND., D.P.H.

THE treatment of cases of heart disease by the administration of barium waters combined with the Nauheim system of baths having been carried out at Llangammarch Wells during the past three years, the following case may be of interest to the readers of THE LANCET.

A man, aged thirty-four years, engaged in office work, consulted me in April last. There was a history of the patient having suffered from chronic rheumatism, but his present trouble had existed for about a year, during which time he had complained of dyspnœa and palpitation, pulsation in the cardiac region and carotids being constantly present, even at night. His appetite was poor, and the bowels were irregular. He presented signs of aortic stenosis, mitral regurgitation and dilatation, the apex beat being in the nipple line, with a heaving impulse. The pulse was regular, with rather an increased tension. The urine was normal. The treatment consisted in the administration of barium water, Nauheim effervescing baths, rest, and careful dieting. He began to improve in a few days, and after three weeks' treatment it was noticed that the apex beat had retracted to a point half an inch within the nipple line; there was a corresponding diminution in the area of cardiac dulness, and the pulsation was less forcible. The effect of the baths was shown by the following average of eight successive observations on the pulse rate; the rate after resting for half an hour before the bath was 74·1, that immediately before leaving the bath was 71·3, while that after resting half an hour after dressing was 66·5. This diminished rate was found on several occasions to remain constant until the evening. Shortly before leaving Llangammarch he stated that he was quite free from any kind of throbbing or other inconvenience, a condition which he had not experienced for many months.

This improvement I consider to be due to several factors which are afforded in this place, chief among them being the mineral water, the baths, and rest.

Llangammarch Wells.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum propriâ collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

A CASE OF TYPHOID FEVER WITHOUT ULCERATION OF THE INTESTINE.

(Under the care of Dr. CHEADLE.)

FROM time to time cases have been met with which during life had been diagnosed as typhoid fever; but when, post mortem, no intestinal ulceration was discovered the diagnosis was doubted. Dr. Sidney Phillips has recorded two cases in which, though Peyer's patches were swollen, yet there was no ulceration even as late as the twenty-first or twenty-fourth days respectively of the disease.[1] A similar case is reported in *La Semaine Médicale*.[2] The following case, though resembling the cases already quoted, differs from them in several important particulars. At the necropsy no sign of any disease of Peyer's patches could be seen; if this case had occurred only a few years ago most physicians would have considered the diagnosis of typhoid fever as very doubtful; but, in addition to the typical character of the clinical symptoms, the serum test during life and the bacteriological observations made after the death of the patient render the diagnosis absolutely certain. For the notes of the case we are indebted to Mr. A. Ferguson MacCallan.

A boy, aged three years, was admitted to the hospital under the care of Dr. Cheadle on Nov. 8th, 1896, with a history of diarrhœa, vomiting, and debility. A brother and a sister of the patient had been for some time in the children's ward, suffering from typhoid fever. The date of the child's admission was probably the tenth day after the onset of the symptoms. His appearance was heavy and apathetic, the lips being dry, cracked, and bleeding. There were on the abdomen three rose-coloured papules, which faded on pressure, and there were four or five on the back. The abdomen was swollen and tympanitic, and the liver was enlarged, but the spleen did not appear to be increased in size. Previously the patient had been healthy, and no important family history could be elicited from the mother. The heart showed signs of slight enfeeblement. On examining the lungs no dulness was found, but the air entry was poor, and there were a few moist sounds and musical rhonchi heard on auscultating the back. The urine was normal. There was no marked diarrhœa, the motions being yellowish-brown in colour and of a soapy consistency. On Nov. 10th subsultus tendinum and marked carphology were observed. On the 12th the catarrhal sounds heard over the chest were slightly louder. Profuse diarrhœa began. On the 18th epistaxis and vomiting occurred. The abdomen was less distended and moved freely with respiration. On the 23rd the breath sounds heard over the chest were obscured by sibilant rhonchi and mucous râles. In the left axilla the breathing was bronchial in character. The deep cardiac dulness was a little increased to the left, and the first sound at the apex was weakened. On the 24th the patient was in a comatose condition and there was slight dyspnœa. Curds were present in the motions. The patient vomited. On the 30th the first sound at the apex of the heart was reduplicated and the second sound was accentuated; this gave a cantering rhythm to the beats. On Dec. 1st the patient was sick after food whenever given. The pulse was feeble and irregular, and he expired in the afternoon. The treatment adopted by Dr. Cheadle was directed to sustain the failing heart by stimulants and cardiac tonics; these included brandy, tincture of digitalis, and aromatic spirits of ammonia. The lung condition was treated with potassium citrate,

[1] THE LANCET, Jan. 31st, 1891.
[2] La Semaine Médicale, March, 1890.

and vinum ipecacuanhæ; the latter drug was, however, abandoned after a time as being a cardiac depressant. The diet consisted of meat teas and milk, which latterly was peptonised. On two occasions when the diarrhœa was excessive enemata of starch and opium were ordered. The case appeared to be one of profound typhoid poisoning, resulting in death from heart failure. On the twenty-first day of the disease, Nov. 19th, on applying the serum test, Mr. MacCallan found that there were loss of motility of most of the bacilli and marked clump formation. The typhoid bacillus was separated from the urine on the twenty-sixth day of the disease by Parietti's method. On the thirty-second day he suspended in 5 c.c. of water part of a two-day old stock culture of the bacillus, and to this were added two drops of blood from the patient. The fluid, previously cloudy, became clear after some hours, the bacilli having formed clumps and settled to the bottom of the tube as a flocculent, uneven mass.

Necropsy.—At the post-mortem examination no ulceration of the intestine was visible, and Peyer's patches appeared to be normal. There was a slight indentation of the mucous membrane close to the ileo-cæcal valve, but this was probably accidental, since microscopical sections showed nothing abnormal. The colon was normal. The spleen was normal in size and appearance; it was opened aseptically, and cultivations on agar, gelatin, and potato were made. The culture tubes after incubation showed typical colonies of the typhoid bacillus. Mr. MacCallan examined microscopically for typhoid bacilli thirty or forty sections of the spleen, but was unable to recognise any. This was not surprising, as Gaffky says that it is sometimes necessary to examine 200 stained microscopical sections of the spleen in cases of typhoid fever before groups of bacilli can be recognised. The mesenteric glands and liver were enlarged. Before the heart was opened blood was collected from the right auricle in Pasteur pipettes and the serum test was carried out with a culture of bacilli which had been separated from the patient's urine. Loss of motility in most of the bacilli and clump formation were observed. The heart showed a slight dilatation of the left ventricle. The bronchi contained muco-pus, and there was some lobular collapse of the lung tissue. Mr. MacCallan wishes to acknowledge the valuable hints he received from Mr. Plimmer.

LEEDS GENERAL INFIRMARY.

A CASE OF PRIMARY DYSMENORRHŒA WITH EPILEPSY CURED BY DILATATION; REMARKS.

(Under the care of Dr. J. BRAITHWAITE.)

THE value of dilatation of the cervix uteri in dysmenorrhœa has been under-estimated because it has been indiscriminately applied to all forms of the disease; but, as in the following case, sometimes certainly it effects a complete and permanent cure. The removal of the concomitant epileptiform attacks is of great interest, because, although it is at the present time customary to throw doubt on reflex neuroses,[1] yet cases undoubtedly do occur, though admittedly rarely, in which severe nervous symptoms disappear on the removal of a distant source of irritation. For the notes of the case we are indebted to Dr. J. A. Clough, resident obstetric officer.

A patient, aged seventeen years, unmarried, was admitted to the infirmary complaining of severe pain at her menstrual periods with "fits." She began to menstruate at fourteen years of age, the dysmenorrhœa beginning at the commencement of menstruation. The pain usually came on just before the period, it was worst on the first day of the period, but passed off before the period ceased. The pain was so severe as to cause the patient to remain in bed. The period lasted from five to seven days, with clear intervals of from fourteen to twenty-one days, the menstruum containing clots. During the week preceding menstruation she had "fits," sometimes as many as ten or eleven occurring during that time. There were no premonitory signs, but she would fall very suddenly, losing consciousness, but with no actual convulsions. The fits lasted about ten minutes, after which she would sleep for several hours. She never passed urine or motions during these attacks. These "fits" began two and a half years ago and had continued up to the time of admission. The patient was markedly anæmic, but her general condition was apparently good. She had been treated by drugs for the dysmenorrhœa without any good result. On examination the vagina was found to be roomy, the cervix being a trifle conical, with a small os. On Jan. 11th the menstrual discharge having ceased only a few hours, the cervical canal was dilated up to No. 7 Hegar. This was done in order to allow the introduction of a laminaria tent of the largest size. No anæsthetic was used. The next day, the patient being under ether, the tent was removed and the cervical canal dilated up to No. 18 Hegar—that is, to about the size of a rather large little finger. This apparently completely cured the menstrual pain, for the mother wrote recently to say that there had been no return of it, although six months had elapsed since the dilatation. The patient has only had two fits since, both within a fortnight of the dilatation. It is somewhat doubtful whether these attacks were true epilepsy, as there was no convulsive action. The patient, however, became unconscious, and the attacks were followed by profound sleep.

Remarks by Dr. BRAITHWAITE.—As it is commonly thought, and, indeed, generally accepted as a fact, that dysmenorrhœa is only temporarily relieved by dilatation, the above case is interesting, especially as there was simultaneous recovery from menstrual epilepsy. It is usually found in the gynæcological ward that the cases which are relieved by dilatation are those in which, like the one related, the pain is at its greatest intensity on the first day of the period and ceases before the period is over. The medical treatment chiefly relied upon is the use of antipyrin just during the first few hours, followed by drachm doses of liquor ammoniæ acetatis. The typical cases for treatment by dilatation are those in which the pain is confined to the first two days of the period. The cause of the pain in these cases is either an active spasm at the os internum or a passive inability to open. During painless menstruation the os internum is open, and this opening is a vital act necessary to the painless performance of the function. For the success of dilatation it is necessary to over-dilate. Over-dilatation cannot be accomplished unless the tent is used previously. This causes a softening of the tissues, so that they yield kindly and readily. The dilatation must also be done just as a period ceases, as the tissues are then soft and already a little open. There are many cases of dysmenorrhœa which are not curable by dilatation, especially some in which probably the whole uterine muscle is in a state of colic. In these cases the pain is not confined to the first two days. There are, of course, many cases in which dilatation, however thorough, fails, but it ought to have a trial in nearly every case in which relief cannot be given by medicinal or other means, and which are severe and of long duration. It has this great advantage, that the patient is in no worse position if it fails.

[1] Knapp: American Journal of the Medical Sciences, Oct., 1895.

Reviews and Notices of Books.

Atlas of Clinical Medicine. By BYROM BRAMWELL, M.D., F.R.C.P.Edin., F.R.S.Edin., Assistant Physician to the Edinburgh Royal Infirmary. Three vols. Edinburgh: T. and A. Constable. 1892 to 1897. Price 31*s.* 6*d.* per volume.

WITH the issue of the last instalment of the third volume of his "Atlas of Clinical Medicine" Dr. Byrom Bramwell has decided to suspend its further publication, although his stores of clinical and pathological drawings are by no means exhausted. The admirable manner in which he has carried out this enterprise deserves recognition, and for the sake of science it may be hoped that means may be found whereby the publication can be continued. It is, however, obviously out of the question that work of this high class, involving great expenditure of capital, should be left to the unaided efforts of one man. Dr. Bramwell has shown the utility and the importance of such work, and we do not hesitate to urge that its further development might well receive practical assistance at the hands of those scientific bodies who have at their disposal funds for

the encouragement of research and the propagation of scientific knowledge. These three volumes contain no fewer than 100 folio plates, many of which are highly artistic and all most faithful representations of clinical and pathological conditions.

It is not merely as an atlas that Dr. Bramwell's work should be regarded. Each volume contains detailed records of high value, reflecting the greatest credit upon the industry and ability of the author. The subjects which have been thus treated—many of them quite exhaustively—are numerous and varied. They comprise many most important contributions to the clinical and pathological study of diseases of the nervous system, such as Friedreich's ataxia, bulbar paralysis, ophthalmoplegia, alterations in the fields of vision, acute poliomyelitis, progressive muscular atrophy and the muscular dystrophies, of which latter a very valuable contribution is to be found in the final instalment of the work, including histological studies of the muscles and spinal cord from cases of pseudo-muscular hypertrophy and myopathic atrophy. Again, the subject of syphilis, illustrated by many drawings, is fully discussed in articles in the second and third volumes; and such conditions as Addison's disease, Hodgkin's disease, chlorosis, and pernicious anæmia are expounded with discrimination and judgment. Amongst other topics to be found in the several volumes are myxœdema, exophthalmic goitre, acromegaly, small-pox, measles, scrofula, and Asiatic cholera, whilst in the third volume there is a copious clinical account, with full illustration, of the effect of the thyroid treatment of certain skin diseases. Nor does this list by any means exhaust the topics which are either commented upon or illustrated, for one notable feature is the series of drawings illustrative of types of mental disease that appear in more than one volume. Having on several occasions drawn attention to the merits of the work and the praiseworthy industry of its author it is hardly necessary to dwell on them here at length, but we could not allow the opportunity to pass of expressing the hope that at no distant date a means will be found for the continuance of a publication which has acquired a distinctive position in medical literature.

The Menopause and its Disorders. (*With Chapters on Menstruation.*) By A. D. LEITH NAPIER, M.D.Aberd., Senior Surgeon, and Surgeon in Charge of Gynæcological Cases, and Lecturer in Clinical Surgery and on Gynæcology, General Hospital, Adelaide, &c. London: The Scientific Press, Limited, 23 and 29, Southampton-street, Strand, W.C. 1897. Price 7*s.* 6*d.* net.

IN his preface the author tells us: "Apologies are, however, unnecessary when a writer has something new to say or some new way of presenting recognised truths. The *raison d'être* of this work will be at once apparent when I state that no book dealing specially with the subject-matter here treated of has been published in Britain within the last quarter of a century. During that time the whole pathology of gynæcology has been so modified that it is now virtually new." Does Dr. Napier really mean what he says? We see that the book consists of thirteen chapters, the subjects of which appear for the most part to be the same as those met with in the numerous treatises on gynæcology in common use, except that in season and out of season the menopause is tacked on. Thus Chapter XII. is entitled "Ovarian Tumours at or after the Menopause." What reason can there be for dragging in the menopause in any useful account of ovarian tumours? They occur practically at all ages, and, so far as we can see in a work which is entitled "The Menopause and its Disorders," there is no reason to include ovarian tumours, which are certainly not disorders peculiar to the time of the menopause. The same criticism applies to the chapters on Fibroid Tumours, on Malignant Disease, and on the treatment of Vaginal and Uterine Displacements in Elderly Women. The truth is that the work is a book on the diseases of women. It is quite incorrect for the author to suggest, as we think he does, "that no book dealing specially with the subject-matter here treated of has been published in Britain within the last quarter of a century." The "subject-matter" is, for the most part, as our readers will see, matter that forms a part of every work on gynæcology. The author's standpoint as a gynæcological teacher will be sufficiently evident from the following quotation on the treatment of procidentia uteri: "In my judgment neither a plastic operation, such as colporrhaphy or [*sic*] perinæorrhaphy, nor shortening the round ligaments, nor ventrofixation, is likely to prove so curative as vaginal hysterectomy for total prolapse in elderly women. Our constant aim should ever be to cure our patients when possible; and in many of these cases this can only be done by total uterine extirpation per vaginam."

A System of Dental Surgery. By the late Sir JOHN TOMES, F.R.S. Fourth Edition. Revised and Enlarged by CHARLES S. TOMES, F.R.S. London: J. and A. Churchill. 1897. Pp. 709. Price 16*s.*

IN comparing this edition with the original published in 1859 the reader cannot fail to be impressed with the great strides that dental surgery has made during the past forty years. The present issue has been thoroughly revised and brought up to date so as to form the most reliable work that is extant in this section of medicine. In glancing through the pages it is very apparent that the changes between this and the previous edition have been somewhat drastic, and everywhere evidence is afforded that the work of editing has been carefully carried out. A chapter on the Bacteriology of the Mouth has been introduced, and the section dealing with caries has been increased and thoroughly revised, so as to embrace all the fresh knowledge that has come to light during the last ten years. In the chapter treating Materials used for Filling Teeth, Mr. Tomes has given a short but concise account of the most recent views on the properties and behaviour of amalgams, a subject of keen interest to the dental practitioner. The portion of the book dealing with manipulative proceedings is still unsatisfactory, and we feel that the value of this important text-book would be greatly enhanced by a fuller treatment of the manipulative methods. True it is that manipulative skill can only be obtained at the chair side, but much that is valuable may be gleaned from well-planned and clear diagrams of typical cases. The chapters on the Pulp and Periosteum are both interesting, but the former would be much improved by the addition of illustrations. The subject of Odontomes is very fully dealt with, and much that is new is to be found in the chapter on Absorption of the Alveoli and Pyorrhœa.

Speaking in a general way, we cannot help feeling that as a text-book for students the work would be far more readable if a little more care were taken in the arrangement of the different subjects on the basis of modern pathology. By this means we feel certain the student would gain a clearer insight into the bond which unites dental with general pathology.

Disorders of Digestion in Infancy and Childhood. By W. SOLTAU FENWICK, M.D., B.S., M.R.C.P. Lond., Physician to Out-patients at the Evelina Hospital for Sick Children. London: H. K. Lewis. 1897. Pp. 378. Price 10*s.* 6*d.*

DR. SOLTAU FENWICK, as physician to out-patients at the Evelina Hospital for Sick Children, has had ample opportunities of observing disorders of digestion in infants and

children, and in the preface of his work he informs us that it is mainly from the notes of some 5000 cases of disordered digestion which have come under his notice that the present volume has been compiled.

There is nothing strikingly original in the work, but it is an excellent compendium of our knowledge on the subject of disorders of digestion in children set forth with discrimination and clearness evidently by one who himself has a thorough knowledge of the various forms of indigestion encountered in a children's hospital. An interesting account is given of experiments made by Dr. Soltau Fenwick upon the contents of the stomachs of healthy children. He finds that in infants at the breast the milk is usually found to be curdled after a residence of from ten to fifteen minutes in the stomach. In infants fed upon cow's milk the total acidity of the gastric contents is more pronounced than in breast-fed infants, and often amounts at the end of eighty minutes to as much as 0·18 per cent. HCl, whilst in breast-fed infants it is 0·13 per cent. In infants who are fed upon farinaceous foods the total acidity of the gastric contents is invariably diminished, and may not exceed more than half the normal.

The description of the various forms of digestive disorders is well given and may be taken as a reliable guide by the practitioner and student. The subject of the diseases of children is usually neglected by students whilst at the hospitals, and, consequently, when they launch out into practice they are frequently puzzled by the many phases which gastric and intestinal troubles present, and a wrong diagnosis and treatment is frequently the result. With such a work as the one now under consideration on their shelves, such difficulties would be easily overcome, and we believe that its acquisition would be a valuable addition to their library. An appendix includes a short account of the methods employed in the chemical examination of the contents of the stomach, and certain recipes and formulæ which are useful for reference.

The book is illustrated by photo-micrographs showing the condition of the walls of the stomach and intestines in health and disease. They are admirably executed and decidedly add to the worth of the book.

LIBRARY TABLE.

The Diagnosis and Treatment of Diseases of the Rectum, Anus, and Contiguous Textures. Designed for Practitioners and Students. By S. G. GANT, M.D., Professor of the Diseases of the Rectum and Anus, University and the Woman's Medical Colleges, Kansas City, Missouri, &c. With two chapters on Cancer and Colotomy by HERBERT W. ALLINGHAM, F.R.C.S. Eng., Surgeon to the Great Northern Central Hospital, Assistant Surgeon to St. Mark's Hospital for Diseases of the Rectum, &c. Illustrated with 16 full-page chromo-lithographic plates and 115 wood engravings. Philadelphia: F. A. Davis Company. 1896 Pp. xiv.–399. Price $3 50 net.—In this volume there are many points which deserve commendation. The descriptions are satisfactory, the treatment is given very fully, and the illustrations are numerous. A great amount of care has doubtlessly been devoted to the chromo-lithographs, and many of them are excellent, but Plate VI. is decidedly useless, as it shows practically nothing and can in no sense be called artistic. The author ascribes much importance in the production of disease of the rectum to railway work, as he has found hæmorrhoids, fissure, and prolapse especially common among railway employés. As Dr. Gant has had very great opportunities of seeing patients drawn from men of this class his observations are of value. The two chapters on Cancer of the Rectum and Colotomy contributed by Mr. Herbert Allingham are, as might be expected, carefully written.

Clinical Papers on Surgical Subjects. By HERBERT W. PAGE, M.A., M.C. Cantab., F.R.C.S. Eng., Surgeon to St. Mary's Hospital and Lecturer on Surgery at its Medical School, Member of the Court of Examiners, Royal College of Surgeons of England, &c. London: Cassell and Co. 1897. 8vo, pp. x.–208 Price 5*s.*—This little volume contains ten clinical lectures delivered at St. Mary's Hospital and two other papers, and though they have all appeared previously in various journals and periodicals, they are well worth reproduction in a permanent form. They are naturally of varying degrees of interest, but there is not one which does not present the subject with which it deals in a novel and attractive form. It is difficult to say which is the most important, but the lecture dealing with a case of Fatal Pelvic Injury in a Child is certainly extremely instructive. The case is as follows. A boy, aged seven years, had been run over, and as a few drops of blood trickled from the urethra a soft catheter was passed, and a little blood was withdrawn, but no urine. The same night the child's bladder seemed to become distended as high as the umbilicus; it was thought that the distension of the bladder was due to blood clot, and as this could not be washed out per urethram a trocar and cannula were introduced above the pubes and an attempt was made to wash out the bladder from above. Subsequently urine flowed from the wound and the child died two days later. At the necropsy it was found that the pelvis had been fractured and had torn the urethra, and that the dulness above the pubes was due to an effusion of blood into the prevesical space. The trocar had not pierced the bladder. Another paper of great value is on Traumatic Rupture of the Ureter. The book is dedicated in a very appreciative spirit to the author's former house surgeons at St. Mary's Hospital.

Die Syphilis der Nase und des Halses. Von Dr. P. H. GERBER. Mit 2 Tafeln. (*Syphilis of the Nose and Throat.* By Dr. P. H. GERBER. With 2 plates.) Berlin: Verlag von S. Karger. pp. 74.—This is a reprint of a paper which appeared in the *Dermatologische Zeitschrift*, and was written at the invitation of Professor Lassar. It deals with syphilis as it affects the nose, the naso-pharyngeal space, the pharynx, and the larynx. A valuable feature is an extensive bibliography. The illustrations are good, though a little too highly coloured.

The Operations of Surgery, intended especially for the Use of those recently Appointed on a Hospital Staff and for those Preparing for the Higher Examinations. By W. H. A. JACOBSON, M.Ch. Oxon., F.R.C.S.Eng., Assistant Surgeon, Guy's Hospital; Surgeon to the Royal Hospital for Children and Women. London: J. & A. Churchill. Third edition. 1897. With 398 Illustrations. Price 34*s.*—So well known is Mr. Jacobson's work that it may seem almost superfluous to praise this new edition. The progress in operative surgery during the six years which have elapsed since the second edition appeared has been very great and has necessitated a corresponding increase in the matter contained in this treatise. The number of illustrations, 199, in the first edition has been exactly doubled, and the text has been increased to an almost equally great extent. A single volume is very much more convenient for reference than two volumes, therefore we are very glad that Mr. Jacobson has succeeded in compressing all the subject into this one volume; this has, however, only been possible by the adoption of a smaller type for part of the work, and a slightly larger page; but we fear that this will hardly be practicable in the future if surgery increases in extent as it has increased of late years. To those who knew the previous editions it will suffice to say that in the present edition the work has been brought thoroughly up to date; and to those who have not known the book in its earlier form, and who need a careful and scientific treatise on the performance of

operations, we can confidently recommend Jacobson's Operations of Surgery.

B. Bradshaw's Bathing Places and Climatic Health Resorts. London: Kegan Paul, Trench, Trübner, and Co. 1897. Price 2*s.* 6*d*.—This is a most useful book in many ways, though we do not quite see the need of the table of diseases and the places where they are most effectually treated. For instance, to call "abdominal swellings" a disease is absurd. To begin with, swelling of the abdomen is a symptom, and not always of disease. However, with this exception the book appears to be carefully drawn up, and gives a list of baths and health resorts all over the world, even to the little known but valuable springs in the Caucasus. The suggestions at the beginning are admirable and to be pondered upon, though we think that it is at last beginning to dawn upon the average Briton (1) that the Continent was not entirely created for his special use, and (2) that occasionally it is possible that he may come across "a foreigner" who is as good a gentleman as himself, or even better.

JOURNALS AND REVIEWS.

Science Progress. July, 1897.—This quarterly issue is a decidedly all-round interesting number. From the medical point of view perhaps the paper on "The Venoms of the Toad and Salamander," by Dr. Richard T. Hewlett, merits the first place in our attention. We deal with it in another column. The important contribution by Mr. C. A. Barber, M.A., on "The Diseases of the Sugar-cane" is continued. Finally, in the longest paper in this number, Mr. Minchin, M.A., discourses upon "The Position of Sponges in the Animal Kingdom." He inclines to the view that they are true metazoa.

Caledonian Medical Journal.—Dr Alastair MacGregor, of Shepley, Huddersfield, publishes the first portion of a remarkable paper on Second Sight, the continuation of which is promised for the October number. He gives details of nine cases, in five of which either himself, himself together with his sister, his father (a clergyman in Skye), or his grandfather (also a clergyman) were immediately concerned. Two of these nine events were instances of presentiment only; all the others were accompanied by surprising audible or visible manifestations, and one of them may be quoted as a typical example. Many years ago Dr. MacGregor and his sister were on a visit to an invalid clergyman near Inverness. One evening after sunset, in the month of October, the two visitors were examining photographs in the drawing-room with the lady of the house, the husband being in bed, and his nephew being expected to arrive from a distance about 8 P.M. About 6 P.M. the three persons in the drawing-room all at once "heard the sudden sound of a trap driving quickly up the avenue, followed speedily by the crunching of wheels on the gravel at the front door, the grating noise of a brake being applied—in short, all the usual sounds attendant on the drawing-up of a conveyance." Dr. MacGregor rushed to the front door to welcome his friend, and continues: "To my surprise there were no signs of a trap being there; the moon was shining brightly, and everything was still. I had just re-entered the hall, feeling very crestfallen, when I heard a piercing shriek in the dining-room, and out rushed Mrs. —— saying that Mr. —— had just died." The weirdness and the speedy realisation of Dr. MacGregor's various "warnings" are not excelled by the vision of Theoclymenus, as related in the twentieth book of the Odyssey. This personage, who had a reputation as a seer, on a festive occasion told the self-complacent suitors of Penelope that their heads and faces and knees appeared to him to be veiled in darkness, and their cheeks to be wet with tears, the walls of the apartment were splashed with blood, and the fore-court of the house and the hall were filled with spectres on their way to the under-world. He was laughed at for his speech, but Ulysses had already returned in disguise, and in a day or two put all the suitors to death. Another interesting article in the current number of this journal is entitled "Medical Heroes of the 'Forty-five," by Dr. W. A. Macnaughton, medical officer of health of Kincardineshire.

Analytical Records
FROM
THE LANCET LABORATORY.

BALLARDVALE LITHIA-WATER.

(AGENTS: INGRAM AND ROYLE, 28, UPPER THAMES-STREET, E.C.)

LITHIUM SALTS seldom occur in natural mineral waters unassociated with other salts which may detract from the medicinal value of the water in the treatment of gouty disorders. Assuming that the specimen of Ballardvale water recently submitted to us is a naturally occurring product its composition is certainly remarkable. Thus, of the total quantity of mineral water (15·4 grains per gallon) no less than 13 grains, or 84 per cent., consisted of carbonate of lithium. The water is consequently very soft to the taste, and is quite free from mineral salts such as the sulphates of lime, which are undesirable for persons who suffer from gout. The common salt amounted to only 0·7 grain per gallon. Further examination showed that the water was of admirable organic purity. It is well known that draughts of pure water copiously taken are of advantage in uric acid diathesis in irrigating the urinary passages. When it happens that the water so employed contains lithium in the form of alkaline salts, as in the case of the Ballardvale water, there can be little doubt that an important advantage in treatment is thus gained. The water can be obtained either plain or aerated.

COPENHAGEN BEERS (GAMLE CARLSBERG).

(IMPORTERS: F. BAGGER AND CO., 3 AND 4, GREAT WINCHESTER-STREET, E.C.)

Since the discovery by Dr. Hansen, of the Carlsberg Laboratory, Copenhagen, that the various diseases of beer were caused by certain species of yeast, brewers have been enabled to place upon the market a much more satisfactory and, moreover, a more uniform product. Instead of employing yeast without regard to its specific character as to whether it contains mixed forms or not a pure culture is separated which produces a beer of always the same quality and character. The same "race" of yeast is always employed. This, together with the fact that the fermentation is conducted slowly and at a low temperature (the yeast growing from the bottom upwards rather than on the surface, as in the case of English brewing) is quite sufficient to account for the excellent and uniform condition of beers produced on the Continent. Types of these are admirably illustrated in some samples we have recently received from the Copenhagen Laboratory. The results of analysis were as follows:—Pilsener: extractives, 4·48 per cent.; mineral matter, 0·15 per cent., alcohol, by weight 3·41 per cent., by volume 4·27 per cent., equal to proof spirit, 7·49 per cent. Lager beer: extractives, 5·16 per cent.; mineral matter, 0·22 per cent.; alcohol, by weight 4·0 per cent., by volume 5·0 per cent.; equal to proof spirit, 8·77 per cent. Carlsberg beer: extractives, 6·11 per cent.; mineral matter, 0·35 per cent.; alcohol, by weight 4·0 per cent., by volume 5·0 per cent., equal to proof spirit

8·77 per cent. Imperial stout: extractives, 9·43 per cent.; mineral matter, 0·35 per cent.; alcohol, by weight 4·62 per cent., by volume 5·78 per cent., equal to proof spirit 10·13 per cent. In not one of these specimens was any preservative found, while there was no evidence of malt or hop substitutes being present. They were all in good, sound condition, possessing that peculiar taste and character which beers fermented at a low temperature evince. Again, while the amount of alcohol was comparatively small the beers contain a maximum amount of malt extractives, and the taste is decidedly less bitter than ordinary English ale. As we have pointed out before, the fact that a smaller quantity of hops is employed, coupled with the smaller percentage of alcohol, affords some explanation that the so-called lager beers are lighter and less stupefying than the mild and bitter ales brewed in this country.

FROMMES EXTRACT.

(FROMMES EXTRACT CO., 61½, FORE-STREET, E.C.)

This extract is of purely vegetable origin, and, according to the results of our own analysis, presents the composition of a complete food (*vide* THE LANCET, Dec. 4th, 1896). In appearance it is like ordinary meat extract, and may be used in a similar way. Since we published our analysis of the extract we have received further preparations, into the composition of which this vegetable extract largely enters. They are—(1) soup tablets, (2) condensed milk, and (3) various biscuits. The initial food value of the articles just indicated are undoubtedly enhanced by this addition. Another preparation of the extract contains a less proportion of fat, and in a great number of cases we think this modification would constitute an improvement in regard to digestibility. The extract gives distinct evidence of peptones. As is well known, there are distinct merits belonging to vegetable food which are absent in animal food, and *vice versâ*. This extract, therefore, should afford an important nourishing adjunct to the dietary.

LEMON SQUASH AND LIME JUICE CORDIAL, &c.

(WALTER SCOTT AND CO., ROCK FERRY, CHESHIRE.)

We found no evidence during the course of our examination of these preparations that they are not, as stated, "prepared from the finest selected fruit." It is obvious that if unsound fruit had been employed the flavour of the resulting cordial or liquid would be unsatisfactory. The samples of lime juice cordial and lemon squash possessed a good fragrant flavour characteristic of the respective fruits from which they are made, but in our opinion they are too syrupy and sweet. The acidity of the former, calculated as crystallised citric acid, amounted to 1·89 per cent., and of the latter to 2·17 per cent. In the raspberry and lemon preparation as well as in the black currant liquid we could trace no evidence of foreign colouring matters. All the preparations proved to be free from metallic contamination, but each one is somewhat heavily preserved with salicylic acid.

SCOTCH WHISKY (THE BUCHANAN BLEND).

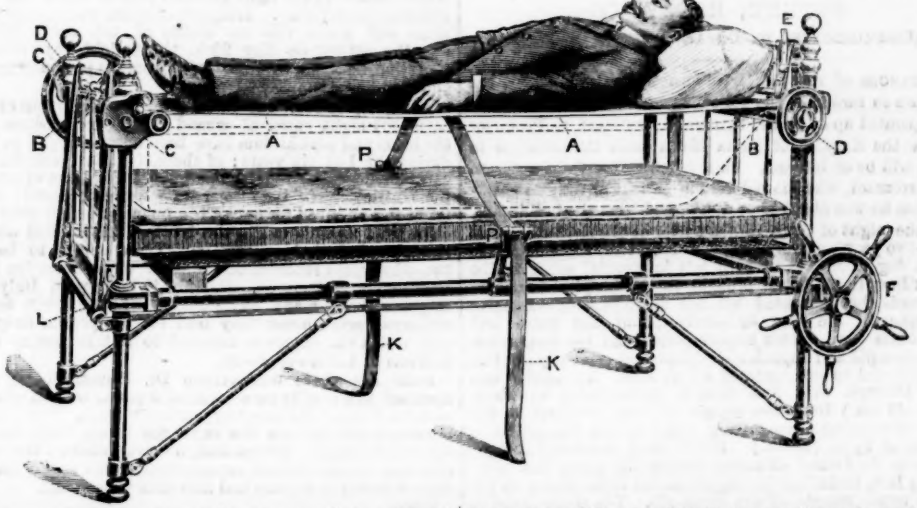
(JAMES BUCHANAN AND CO., GLASGOW, LEITH, AND LONDON.)

Our analysis shows this to be a remarkably pure spirit, and therefore well adapted for medicinally dietetic purposes. It contains a very small proportion of extractive matters, while the acidity is practically *nil*. The actual results of analysis were as follows: Alcohol, by weight 38·78 per cent., by volume 46·02 per cent., equal to proof spirit 80·64 per cent.; extractives, 0·21 per cent.; mineral matter, *nil*; acidity reckoned as acetic acid, 0·027 per cent. The spirit, whilst free from injurious and crude products, possesses a delicate and smooth flavour, owing partly to skill in blending and partly to the maturing effects of storage for some years in wood.

New Inventions.

THE "FACILE PRINCEPS" BEDSTEAD.

A BED as ordinarily constructed is not an ideal arrangement even for the healthy, and when used by the sick and suffering is often a source of inconvenience to practitioner, nurse, and patient. Numerous attempts have been made to construct a bed which should answer the manifold requirements of the sick-room, but the majority have been more or less necessarily complicated and expensive. A cheap and simple couch for the sick has yet to be invented, but in the meantime the bed illustrated below merits attention. Simply stated, the patient is put upon a sheet divided through its entire length with its edges over the central axis of the bed overlapping. The top and bottom ends of this divided sheet are affixed to rollers, which are made to ascend and descend on the four pillars of the bedstead. The following describes the process in detail. Two iron rollers, B B, are attached by means of four hollow



boxes, C C and C C—in which their respective ends terminate—to the four pillars of the bedstead. The sheet upon which the patient is lying, A A, is attached to the rollers, B B, and

can be tightened or loosened by means of the small wheels, D D. This sheet is divided down the centre from head to foot, with the smooth edges overlapping from two to six inches. The webbing E passes upwards at one end from the sheet roller, over the top rail of the bedstead, down to and round an iron drum, L, to which it is fixed. A second piece of webbing passes from this drum underneath the bed to a similar one affixed to the other end of the bedstead, and upwards to the top rail of the bedstead, then the end is attached to the sheet roller at that end; so that the two rollers with sheet attached are raised simultaneously by turning the large wheel F, which is fitted to the iron drum at one end, and also controlled by a ratchet. When necessary to raise the patient, as in the illustration, either to change the sheets or for any other purpose, the sheet is tightened until it becomes almost rigid, and the nurse turning the wheel F, the patient is raised on it with an easy and almost imperceptible motion as the brass wheels of the rollers glide up the pillars of the bedstead. It is fixed by means of a pawl and ratchet at any height between the mattress and the top of the bedstead. The nurse can then withdraw the mattress and return it, placing upon it a clean sheet divided in the same manner as the one upon which the patient is raised, this being lowered until about an inch above the clean one. Then the bands K K, passing round the anti-friction rollers P P, are drawn upwards and towards the centre of the bed, over the patient, thus drawing the two divisions of the sheet apart and leaving the patient upon the clean one beneath. Either end of the sheet can be raised independently of the opposite end, if so desired, in order that the patient may be placed in an inclined position. There is also an arrangement by which a semi-sitting position may be obtained or the position naturally assumed on a double inclined plane. If required an operating table can be attached to the bed and the patient lowered upon it, thus obviating the removal of the patient from the bed. For giving the bath in typhoid fever the bed seems to offer great facility, and the ease with which the bed pan can be used recommends it to both nurse and patient. Another advantage is that in hot weather or in hot climates the patient can be raised frequently and a current of air allowed to pass underneath the bedding. The bed has been designed by Mrs. William Douglas with a view to economising labour whilst giving a maximum of comfort to the patient, and this we think she has succeeded in doing. The bed can be obtained from Messrs. Maw, Son, and Thompson, 7 to 12, Aldersgate-street, E.C.

PENETRATING WOUND OF THE PERICARDIUM AND LEFT VENTRICLE; SUTURE; RECOVERY.

(COMMUNICATED BY DR. G. SANDISON BROCK.)

INSTANCES of recovery from penetrating wounds of the heart are so rare that the following account of a successful case operated upon by Dr. Parrozzani, assistant to Professor Tassi at the Hospital of Santa Maria della Consolazione in Rome, will be of interest. I am indebted for these notes to Dr. Parrozzani, who showed me the patient already so nearly well that he was about to be discharged from the hospital.

On the night of April 18th, a porter at the river-side, aged thirty-two years, of very robust constitution, received a stab from a dagger in the seventh left intercostal space in the mid-axillary line. When brought to the hospital five hours afterwards he presented all the symptoms of excessive hæmorrhage. He was extremely pallid, the pulse and heart beats were almost imperceptible, and the respiration was very rapid and superficial. There was evidently no time to be lost and he was operated on at once. An incision was made through skin and muscle commencing at about 1¼ in. (3 cm.) from the margin of the sternum in the fourth intercostal space, along which it was carried for a distance of 5½ in. (14 cm.). It was then continued at right angles to its former direction downwards along the mid-axillary line, including the dagger wound in its course, as far as the upper margin of the ninth rib. The whole incision had thus the shape of the letter L inverted. The pleura was next incised at the level of the fourth intercostal space in the horizontal line of the inverted L, and the fifth, sixth, seventh, and eighth ribs, with the attached pleura, cut through in the vertical line. A triangular-shaped door or shutter, to which the costal cartilages acted as a hinge, was thus formed. Such a large opening was deemed desirable for fear of any wound of the diaphragm or abdominal viscera. On reflecting the shutter, the pleural cavity was found filled with blood, and the pericardium presented a solution of its continuity 1 in. (2½ cm.) in length, from which at regular intervals issued a small jet of blood. The opening in the pericardium having been enlarged to nearly 2½ in. (6 cm.), the cavity was freed of the small quantity of blood it contained. The blood had not accumulated in the pericardial sac in any considerable quantity owing to the fact that the wound in the latter, being at its most dependent part near the apex of the heart, had allowed the blood to escape readily into the pleural cavity. This was a fortunate circumstance, since the usual cause of death in these cases—viz., the fatal pressure exercised upon the heart by the blood accumulating in the sac around it—was here absent. The apex of the heart presented a wound about ¾ inch (2 cm.) in length, from which the blood spurted in small jets at every beat of the organ. The pulsations of the heart had become so extremely feeble that it seemed as if they were about to stop altogether. Introducing the little finger of the left hand into the wound, Dr. Parrozzani found that it passed into the left ventricle obliquely, but quite freely from the apex towards the base. The inserted finger served the double purpose of checking the hæmorrhage and of fixing the apex of the heart so that the wound could more easily be secured. A large curved needle armed with No. 2 silk was now passed deeply through the whole thickness of the myocardium, but without touching the endocardium, the little finger being withdrawn from the wound and the thread rapidly knotted. The entrance of the needle into the myocardium caused the heart to throb vigorously, and the withdrawal of the finger was followed by a gush of blood completely flooding and obscuring the field of operation. The wound was, however, effectually closed by three more stitches, the blood-clots cleared out of both pericardial and pleural sacs, and the "shutter" in the chest wall finally closed by deep and superficial sutures. The operation lasted an hour and a quarter. No chloroform was used, but twelve subcutaneous injections of ether and five of camphorated oil, and a few of caffeine were administered. A saline solution (1500 grammes) was introduced by hypodermoclysis, and thorough auto-infusion (by means of Esmarch's bandages), was practised. One hour after the operation the pulse became quite perceptible. The wound healed by first intention, and no complication in myocardium or pericardium arose during convalescence. The temperature on one occasion rose to 102° F., but this was probably connected with a slough which formed in the right pectoral region where the saline solution was injected. Traces of albumin were found in the urine and there was an excess of uric acid. When I saw the patient on May 26th, thirty-eight days after the operation, he had nearly recovered from his profound anæmia and said he felt quite well.

According to Professor Tassi[1] (in whose clinic four of them occurred) eight cases of wound of the pericardium or of the heart and pericardium have been operated upon in Rome during the last six years; of these, four involved the pericardium alone and four the pericardium and one or other of the ventricles. Of the former three were successful; of the latter two survived for only a few hours, one died after eight days from anæmia, while the fourth—that related above—has proved entirely successful. There appear to be only two other cases recorded of the kind where operative interference was attempted. Happily it is only in Italy that surgeons have many opportunities of practising cardiac surgery—opportunities they owe to the terrible frequency with which the dagger is resorted to in this country in the quarrels of the lower orders.

Since the above was written Dr. Parrozzani has again operated in a similar case—that of a young woman who was stabbed through the heart by another woman. The mode of procedure adopted was the same, the injury being again in the left ventricle. The patient, however, died on the second day, and on post-mortem examination it was found that the inter-ventricular septum had also been penetrated.

Rome.

[1] Bullettino della Reale Accademia Medicale di Roma, anno 1896-7, fasc. i.

THE LANCET.

LONDON: SATURDAY, JULY 31, 1897.

THE medical officers of health of Scotland are to be congratulated on the very satisfactory alterations which have now been made in the Public Health (Scotland) Bill. The whole profession, indeed, has a right to congratulate itself, and the public not less than the profession.

It happens that an Act applying to the burghs of Scotland, though not to rural districts—the Burgh Police (Scotland) Act of 1892—contains an extraordinary provision that the sanitary inspector (and *not* the medical officer) shall "superintend and enforce the sanitary provisions" of the Public Health Acts. This unique enactment appears to have had its origin in some vague notion that if a medical officer of health in a burgh were engaged in private practice he would be likely to be less independent than a sanitary inspector wholly occupied in the service of the local body. While we are strongly of opinion that it is in the interests of public health that the districts supervised by medical officers of health should be so large as to debar such officers from general practice, yet it is absurd to say that a whilom joiner or plumber who is appointed to be sanitary inspector and fire-master and road surveyor in a petty burgh at a salary of £70 or £80 a year, and whose main anxiety is to get other £10 added, is likely to be more independent in his work than a medical officer who has an income, say, of £500 a year independently of the burgh commissioners. Anyhow, nothing more objectionable could well be conceived than this provision in Section 75 of the Burgh Police Act, which slipped through unchallenged at the fag end of the Session of 1892, and which hoisted the sanitary inspector into the position of "superintending and enforcing the sanitary provisions" of the Public Health Acts in burghs. It was most important, therefore, as we pointed out in a previous article,[1] that the passing of a new Public Health (Scotland) Bill should be taken advantage of to attack Section 75 of the Burgh Police (Scotland) Act. The attack was made from two points. In the first place, several members of Parliament gave notice of motion that the medical officer of health of every local authority, burghal and rural, should in future be responsible for the enforcement of the provisions of the Act, and in some of these notices the very words above quoted from the Burgh Police Act were copied, with the substitution of medical officer for sanitary inspector as the responsible official. In the second place, other Members of Parliament set down amendments providing for what would amount in practice to the repeal of the objectionable part of the Burgh Police Act. It should be explained here that last year when the Bill was in the Upper House Lord BALFOUR of BURLEIGH, the Secretary of State for Scotland, granted a useful concession to medical officers of health. Since the formation of county councils about seven years ago several of these bodies have learned by experience that a public health department does require a responsible head, and that that head ought to be the medical officer of health. But on framing by-laws to give effect to this conclusion they were met by the difficulty that, excepting in one notable instance, the central authority refused its sanction on the ground that the present Public Health (Scotland) Act does not provide for the subordination of the sanitary staff to the medical officer of health. Lord BALFOUR'S policy has been, not to make the medical officer of health supreme in his department, but to allow every local authority to do so if it sees fit. He has apparently had in view the possibility of medical officers of health being incompetent, or inactive, or over-active. To give effect to his policy he inserted a provision that local authorities should "regulate the duties and relations" of the two classes of officials, and that this power should refer, not only to future appointments, but to appointments already made. It was in connexion with this provision that the second attack was made on the Burgh Police Act, the attack taking the form of a motion that the regulation of duties and relations of medical officers of health and sanitary inspectors should take effect, "notwithstanding anything contained in Sections 75, 76, and 77 of the Burgh Police (Scotland) Act, 1892"—that is, notwithstanding the enactment that in burghs sanitary inspectors were to "superintend and enforce" the sanitary provisions of the Public Health Acts. There were therefore before the House two sets of amendments, the first declaring it to be the duty of the medical officer of health to "superintend and enforce," and the second declaring that the new Act should override the Burgh Police Act in so far as that Act had provided that the sanitary inspector should be the officer appointed to "superintend and enforce" the sanitary sections of the Public Health Acts. The position created by these two sets of amendments was that if, in view of Lord BALFOUR'S policy, as above indicated, the Government refused to accept the first, they could hardly refuse to accept the second, for every argument advanced against the first would be an argument in favour of the second. This was what actually happened in the debate. The first amendment was proposed in an able speech by Captain SINCLAIR, who had obtained a knowledge of public health administration in the London County Council, and who had no hesitation in urging that in the district of every local authority the medical officer of health should be made the responsible head of the health department. The LORD ADVOCATE declared that the acceptance of Captain SINCLAIR'S amendment would place the medical officer of health above the local authority itself. The statement was an amazingly strong one, seeing that an Act passed by a Conservative Government has since 1892 placed the sanitary inspector in burghs in exactly the same position as Captain SINCLAIR'S amendment proposed that the medical officer of health should now be placed. But the virtue of the LORD ADVOCATE'S statement consisted in its strength, so far as the second amendment was concerned, and the first amendment being defeated (though it received an unlooked-for

[1] THE LANCET, May 8th, 1897, p. 1282.

amount of support), there was no choice but to accept the second. It is no doubt conceivable that this latter amendment might have been accepted independently of the introduction of the former, but in a matter so important nothing could be left to chance.

Sir CHARLES CAMERON, in the Grand Committee, fought hard against a most retrograde proposal to relax the requirement of the present law that future medical officerships of health shall be conferred only on holders of qualifications in public health. The proposal was that in the case of burghs a public health diploma might be dispensed with "with the express consent of the Local Government Board." This was carried in committee by a small majority, and there seemed little likelihood of the decision being reversed on the report stage; but the unexpected happened, and the honourable Member is to be congratulated on his success in restoring the original requirement.

Further, in Clause 15, an awkward slip had been made with regard to the power of medical officers of health to perform any of the duties of sanitary inspectors. In the interests of sparsely populated highland counties Mr. CALDWELL had proposed that every medical officer of health might, whenever he saw fit, perform any duty which a sanitary inspector would be empowered by the Act to perform. This was objected to as amounting to an insidious attempt to place the medical officer of health at the head of the sanitary staff, and a modification was accepted that a medical officer of health might perform such duties when "authorised" by the local authority. By an unfortunate error the word "required" was set down instead of "authorised," and in the Report stage Mr. CALDWELL got this remedied.

Much anxiety was felt as to the fate of Clauses 22 and 36, in which it was proposed that the sanitary inspector should have conferred on him the statutory right to certify nuisances as a basis for legal prosecutions. Quite a number of members—Sir WALTER FOSTER, Colonel DENNY, Dr. FARQUHARSON, and others—had given notice of amendments to omit the sanitary inspector from both clauses, and the LORD ADVOCATE himself had set down such an amendment as regards Clause 36, which deals with offensive trades. The fight, therefore, was waged entirely round Clause 22, and here Sir WILLIAM PRIESTLEY did excellent service. His amendment differed from the others in proposing to omit both medical officer of health and sanitary inspector, so that the grounds for initiation of proceedings would be left entirely to the local authority. As it turned out, this was a judicious compromise. The LORD ADVOCATE had been anxious to meet the difficulty by altering the clause so that proceedings might be initiated either on a certificate by the medical officer of health or after a report by the sanitary inspector. This was no doubt an improvement, in so far as the Bill would no longer have assumed the competence of the sanitary inspector to "certify" nuisances, but only to "report" regarding them. There would still, however, have remained on the face of the Bill an invitation to local authorities to take proceedings at law as to danger or injury to health based on a sanitary inspector's report, and without reference to, or consultation with, the medical officer of health. Sir WILLIAM PRIESTLEY therefore adhered to his amendment, and the LORD ADVOCATE, after listening to both lay and medical opinions, frankly yielded, and withdrew his own proposal. On other clauses in the Bill alterations were made on similar lines.

The success which has been met with in the report stage is most gratifying. The support which was received, not only from medical Members of Parliament such as Sir WALTER FOSTER, Sir WILLIAM PRIESTLEY, Sir CHARLES CAMERON, Dr. FARQUHARSON, and Dr. CLARK, but also from lay members interested in public health like Captain SINCLAIR, Colonel DENNY, Mr. BRYCE, and Mr. J. A. CAMPBELL, deserves every acknowledgement. The LORD ADVOCATE'S attitude, too, at least in the later stages of the discussion, was much more satisfactory than in Committee. And as regards Mr. CALDWELL there is no doubt, we think, that he was anxious to rectify the blunders which he had unwittingly committed in Clauses 22 and 36. His acquiescence in the reversal of his amendment on Clause 36 is noteworthy, and so also is his support of Sir WILLIAM PRIESTLEY'S amendment on Clause 22, and the vote which he both gave and "voiced" with regard to Clause 45. At this period of the session it is hardly likely that anything which has been gained in the Commons will be lost in the Lords, but even there vigilance will be necessary.

In the course of this discussion we have held that the interests of the public and those of the medical profession are identical. The public, however, could not be expected to be so much alive to the threatened danger, and the duty of informing Parliament has therefore fallen mainly upon the profession. The essential unity of medicine has been pleasantly shown in the ungrudging fashion in which the General Medical Council and the general practitioners have coöperated with the health officers in this work of educating Parliament. Medical societies and branches of the British Medical Association have vied in activity with the organisations specially representative of sanitary science. This is as it ought to be, and we doubt not that it will so remain. It would be an evil day alike for preventive medicine and for curative medicine if they became seriously dissociated from each other.

THE new Bill dealing with the re-constitution of the University of London has been introduced into the House of Lords and has passed practically without debate. On the second reading the Duke of DEVONSHIRE, as Lord President of the Council, stated that after prolonged negotiations with the various parties interested, the present Bill had been introduced as a workable compromise. Lord KIMBERLEY as a Fellow of the University of London, gave it his blessing. Its career in the House of Lords has been a very smooth one. It is in the House of Commons that difficulties will probably have to be met and overcome. We hope that the Government is really in earnest and intends to force the Bill through during the present session. We cannot pretend that the Bill is an ideal one or that it represents our views that a teaching university and an Imperial examining board should be kept apart. But if they must run together in double harness

the arrangements in the Bill seem to us to be very well adapted to the purpose intended. Mr. COZENS-HARDY, as chairman of the Committee of Graduates generally approving the schemes of the COWPER Commission, asks that the scheme shall be supported, and this is re-echoed by Dr. T. B. NAPIER and Mr. J. B. BENSON, the chairman and secretary of the Gresham Amendment Committee. Mr. E. H. BUSK, as chairman of Convocation, also strongly recommends his fellow-graduates to support it.

There is no question that if London is to have a real university it must be established on some such lines as are suggested in this compromise. The idea of a teaching university on the Scottish or German plan is beyond the domain of practical politics whilst the present University and its Imperial examining board are in possession of the field. This Bill varies in some important points from those introduced in 1895 and 1896. The Commissioners have no longer a free hand in framing statutes and regulations provided these are in general accordance with the scheme of the report of the COWPER Commission, but a number of important details are placed in the Schedule of the Bill with which they cannot interfere. In Part I. of the Schedule the constitution of the Senate is laid down, and it is not only to be the supreme governing body but the Executive of the University. Three standing committees will have advisory powers only. First, the Academic Council consisting of the sixteen members of the Senate appointed by the Faculties, the three *ex-officio* members, and a senator or senators selected by the Senate to make the number of members up to twenty, this body forming the committee for internal students—i.e., students who have matriculated at the University and who are pursuing a course of study approved by the University in a school or schools of the University or under one or more of the recognised teachers of the University. Secondly, the Council for External Students, consisting of the sixteen members of the Senate appointed by Convocation—other than the Chairman of Convocation—the three *ex officio* members, and senators elected by the Senate to make up the number of members to twenty-eight. Thirdly, a Standing Board to promote the extension of University teaching to consist of the three *ex-officio* members and senators elected by the Senate. The *ex-officio* members of all these three committees are the Chancellor, the Vice-Chancellor, and the Chairman of Convocation. The constitution of Faculties, Boards of Studies, and the standard of the examination for the degrees as being equal for internal and external students are also authoritatively laid down. The certificates and diplomas will state whether the candidate has passed as an internal or external student. Inasmuch as every medical student must necessarily be an internal student, his position is not altered, but the change is of great importance in the Faculties of Arts, Law, and Science.

There can be no doubt that the opponents of the COWPER scheme have gained very substantial advantages in the present Bill. They have secured eighteen out of fifty-six members of the Senate instead of one-seventh; they have prevented the Academic Council having any executive functions, and they have also secured a position for the Council for the external students coördinate with that of the Academic Council for internal students. The constitution of the Statutory Commission could hardly be improved. Lord DAVEY (chairman) the Lord Bishop of LONDON, Lord LISTER, Sir WILLIAM ROBERTS, Sir OWEN ROBERTS, Professor JEBB, and Mr. BUSK (the chairman of Convocation) are so thoroughly versed in the various phases of the question of higher and technical education in London that it is almost needless to say that their names have been received with general approval.

A GREAT deal of ill-feeling has been engendered, and some scandal has been created, by the action which the Vestry of St. George's, Southwark, have taken with regard to the annual report of their medical officer of health. For some reason or other Dr. WALDO'S reports do not find favour with certain members of the vestry, and it is highly probable that this is, in part, due to the fact that Dr. WALDO does not commend the vestry for things which they ought to do, but have left undone. Under any circumstances the vestry, or one of their committees, proposed to revise the annual report and to print only so much of it as seemed good to them. According to the Order of the Local Government Board, dated Dec. 8th, 1891, every metropolitan medical officer of health is required to make an annual report comprising a summary of the action taken and of advice given for preventing the spread of disease, and comprising also an account of the general sanitary condition of the district at the date to which the report refers. There is also to be an account of inspections made, of conditions that are injurious to health, and of proceedings taken or advised as to numerous matters, including offensive trades, dairies, factories, workshops, &c., and this report must be sent by the medical officer of health to the Local Government Board. It will be obvious to every right-minded person that it is essential that this report shall be that of the medical officer of health, and not a report that has been tampered with and amended. This is as necessary in the interests of the public as it is for the purposes of the Local Government Board, for after all it is primarily the public interests and not those of the vestry that are in question in this annual report. It has, therefore, always been held that this annual report must not be altered by any person other than the medical officer of health himself; and it is the proposal to modify the reports of Dr. WALDO, or to subject the issue of them to a revising committee of the vestry, that has brought about the discreditable proceedings which have for some time past been in progress in Southwark.

At this stage of our remarks we would point out that directly any indication of supervision of annual or other reports by a health officer becomes apparent it will be policy on the part of that officer to confine his reports somewhat strictly to the instructions issued by the Local Government Board in the matter; for we are free to admit that we have in certain cases seen discussions and theses embodied in annual reports, of which a critical authority would have a right to say that they formed no proper part of such a document. And, further, we have seen annual reports of becoming dimensions padded out into a volume of quite undue bulk by a mass of appendices, some parts, at least, of which had no direct or even general bearing on the

sanitary condition or administration of the district in question during the year under review. We do not refer to the Southwark case in this respect; for the vestry, finding that they have no power to edit Dr. WALDO'S reports according to their own liking, have adopted another method of preventing the publicity of this document: they have only printed sixty copies. One of these has presumably gone to the Local Government Board, and the remaining fifty-nine seem to be in the hands of members of the vestry and their friends, the consequence being that we have as yet not seen this report which has caused so much trouble in Southwark.

We do not propose here to discuss the legality of thus limiting the issue of the report, but we must point out to the ratepayers of St. George's, Southwark, that it is their place to see that the annual reports of their medical officer of health are not hidden away in this manner. The Government of this country has required the appointment of medical officers of health for the protection, and in the interests, of the public, and especially of that portion of the community which is least able to defend itself, and to demand that it shall be provided with means of decent and wholesome living. If the vestry have nothing to hide, in so far as they themselves are concerned, or if they think Dr. WALDO'S report contains matter which should not be embodied in such a document, then the proper course would be to print so much of it as constitutes the report, to circulate it widely, and to appeal to public opinion as to its being a proper and honest report. But by taking the step they have adopted they have gone far to convince many that the report contains matter which does properly find a place there, but which they, in their own individual interests, do not want to have exposed to the light of day and to the intelligent apprehension of their constituents. Whatever, therefore, be the reason of this misguided and puerile action, the members of the vestry themselves alone come under suspicion; and for that reason they had better abandon the unfortunate position into which they have drifted.

OUR Dublin Correspondent informs us that 124 cases of beri-beri have occurred in the course of a fresh outbreak of the disease in the Richmond Asylum, Dublin, and it is impossible to learn the serious nature of this recrudescence without anxiety. The reappearance in successive years of so grave and fatal an oriental malady in one of our national domestic institutions is a matter that deserves the most careful consideration, and one that demands the adoption with stringency of all such measures as experience has shown to be most likely to lead to good results.

The cause of beri-beri is unknown, for though all things point to a specific germ the exact organism has not yet been satisfactorily determined. The white staphylococcus of PEKELHARING and WINKLER, it is true, fulfils several of KOCH'S well-known postulates, which have to be satisfied by any germ claiming the honours of specificity, but the whole story has not yet been told. This is well shown by Dr. W. K. HUNTER in a contribution to our knowledge of the etiology of the subject, which will be found on page 240 of this issue, and which contains in addition to a clear account of some careful experiments an interesting *résumé* of the work of previous investigators. But although the discovery of a specific germ has yet to be made, we know perfectly well that where beri-beri has once broken out it is apt to remain, and also that overcrowding and bad ventilation are conditions which greatly favour its spread. In those Eastern countries where it is common it is a dweller on the threshold of gaols, and abides with communities where individuals live closely crowded together in defiance of health and decency. In addition to bad ventilation and overcrowding, it is also recognised that insufficient diet encourages the development of the disease. But it should be borne in mind that these conditions foster, but do not generate, beri-beri. The morbid entity which causes it must be imported into the locality in which the vicious environment prevails, an environment which is eminently favourable to the development of many other epidemic diseases. The first question, therefore, that must suggest itself to those seeking to control the outbreak in the Richmond Asylum is whether there is any evidence to associate its occurrence with any source of infection from countries where beri-beri is endemic; and, as far as we can learn, no connexion seems to have been traced. That the disease was originally brought to the asylum by patients or in food or clothing arriving from some Eastern country seems an inevitable conclusion, and of these infected food seems to us the more probable, for beri-beri is not contagious from person to person. But the infection once brought to the asylum we find that all the conditions which go to form a favourable soil for the development and persistence of the disease are present. The overcrowding is undoubted and the want of ventilation must follow. Sir THORNLEY STOKER, in a communication to a new Dublin paper, the *Daily Nation*, is quoted as saying that "not only is the whole institution overcrowded far beyond its normal accommodation, but that even the new wooden male building is not fit to receive more than half the number at present occupying it. Its two dormitories are at present occupied by 100 patients, although not suited to give sanitary accommodation to more than 50. The female permanent hospital contains as many as sixty-three patients, who have an average of 451·968 cubic feet of space each." Sir THORNLEY STOKER points out that the proper number of persons to be accommodated in such a space would be twenty-five only, and adds that in this wing a corridor is being used as a dormitory, and that the floor space is so over-occupied that of the sixty-three patients seventeen sleep on mattresses placed on the floor. We may take it, therefore, that the presence of the two factors universally allowed to perpetuate and foster beri-beri is established in the Richmond Asylum. Again, the conditions of asylum life altogether, apart from overcrowding and in the presence of perfect hygiene, are not unfavourable to the spread of a disease of low nervous type. With a vicious overcrowding the spread of the disease becomes inevitable when once it has been introduced. The persistency with which it clings to the unfortunate centre of infection is a repetition of what constantly occurs in its oriental homes. In the interests of humanity steps must be immediately taken to make the Richmond Asylum a properly built, properly drained, properly ventilated building for its purposes, and the work of construction must be thorough and must be preceded by all necessary destruction. An inquiry

into the diet of the institution might also repay trouble spent upon it. One of the most important points known regarding beri-beri is the fact that it was practically banished from the Japanese navy simply by a change of diet. At one time the number of cases that occurred on board the Japanese men-of-war was so great as to practically threaten the efficiency of the navy. The change to a more liberal and different dietary almost immediately banished the scourge from the Japanese ships. It has also been found in Borneo that when work was rendered almost impossible by the number of deaths from beri-beri amongst the coolies, the labourers could be kept practically healthy by giving them a more liberal diet, and by generally taking care of their ordinary health.

We have very little doubt that nothing short of very stringent measures will suffice to root out the disease that has settled in the Richmond Asylum, and on the mere ground of economy it would probably be better to incur at once a heavy outlay than to endeavour to check the spread of the disease whilst the patients and the unaffected are still housed together in the infected building. The patients would, undoubtedly, have a better chance if removed to huts in an airy situation, and this suggestion need have no terrors for the community. We have said that beri-beri is not contagious from person to person, and this must be reassuring to the Dublin community. Medical men, both in this country and on the Continent, who have occasion to see invalids on ships coming from the East are alike agreed upon this. No one port has the exclusive privilege of producing examples of the malady, but in the seaport towns where it has been observed it has been usually confined to sailors, who have contracted the affection either in the tropical countries from which they have sailed, or on their passage home, or, and more rarely, shortly after their arrival. It has never spread from these sailors to the persons with whom they associated after landing, or who had care of them when they were sick. The element of contagion from person to person seems, therefore, to be so insignificant that it may be ignored.

Annotations

"Ne quid nimis."

THE PLAGUE AND THE POONA CRIMES.

IT is gratifying to learn, amid all the gloomy news we have of late had from India, that rain has fallen in most districts of the country, that the prospects as regards the future crops are good, and that the pressure and tension which have been caused by the famine are now greatly relieved. India is, we may confidently trust, successfully emerging from the series of severe trials to which she has been subjected. We are glad to learn, too, that a wholesome state of feeling has been exhibited by the greater portion of the native press in regard to the recent murderous outrages at Poona, and that these outrages have been strongly condemned. It is plainly the duty of the Indian Government to adopt strong measures for promptly putting a stop to all incitements to crime and disaffection on the part of the native press. The circumstances connected with the repression of the plague have been altogether exceptional. There has been the eternal conflict between Western civilisation and methods of procedure and oriental religious sentiment and tradition; and the obstacles and difficulties were great on both sides. There is nothing more repugnant to the native mind, nothing which Hindus and Mahommedans more resent, than any interference with the habits of their domestic life or their religious traditions and caste prejudices; and this is not to be wondered at considering all that the loss of caste means to them. On the other hand, it was absolutely essential in the interest of the natives themselves and of everybody concerned that restrictive measures of a hygienic nature should be carried out for controlling the spread of the epidemic. We may be quite sure that the European authorities were as loth to enforce these measures as the natives were opposed to the application of them; the strain was mutual, and based upon strong and honest convictions on both sides. Notwithstanding that the committees for carrying out the powers of the Epidemic Diseases Act were partly composed of natives, female nurses, and female medical practitioners, that they were undertaking a loathsome and perilous task, and that all possible precautions were taken, the action that had to be followed necessarily shocked the religious feelings of the natives and seemed to them a tyrannical interference with their sacred sentiments and customs. Our rule, and a belief in the justice of our conduct, were subjected to very severe strain. The occasion was of quite a different character to the Indian mutiny, for that in its origin and causes was of a military character, whereas this was mainly attributable to the wounded sentiments of the native population fanned by a portion of the disaffected native press. Still, it must be remembered that newspapers do not reach the vast majority of the teeming population of India, who are indifferent and very ignorant and occupied with their daily toil, but superstitious and sensitive to a degree in matters affecting their caste prejudice. When all the circumstances of the case are taken into account it will be seen that the situation was of a critical kind, not from any dimensions that the opposition to our action reached, but from its peculiar nature and the possibilities that lay hidden in it. British rule in India has received a slight but significant shock at Poona. There are so many unforeseen dangers connected with Imperial rule that it is well to be reminded of them from time to time "Lest we forget—lest we forget!"

WATER-GAS.

A DEPUTATION from the Manchester and Salford Sanitary Association recently presented a memorial to the gas committee of the city council expressing concern at the growing practice by municipal gas committees of using water-gas with coal-gas for illuminating purposes. It was pointed out that ordinary coal-gas owes its poisonous properties when respired to the 4 to 8 per cent. of carbon monoxide it contains. Water-gas contains from 40 to 45 per cent. of this gas, and when used to mix with coal- or oil-gas the percentage of carbon monoxide in the illuminating gas thus composed is raised to not less than 18 or 20 per cent., so that it is at least three times as poisonous as ordinary gas. "A person might be fatally poisoned even by a small proportion (as small as 0·5 per cent.) of the gas in air which was respired for some time." Dr. Dixon Mann and Mr. Thomson, the analytical chemist, spoke in support of the memorial, and impressed on the committee the need of warning consumers of the risk of leakage. Mr. Alderman Gibson, chairman of the committee, pointed out the difference between water-gas and water-oil-gas, which latter the committee intended to use. The reason for its use was that with the present plant it was scarcely possible to keep pace with the consumption, that "last year and the year before, making gas night and day, employing their fullest capacity, they were within twenty, or at most thirty, minutes of placing the entire city in darkness. ..... But starting

and stopping the making of water-oil-gas was as easy and almost as expeditious as turning off a meter." He went on to say that starting in a morning they could supply 3,000,000 cubic feet in the afternoon to mix with their ordinary coal-gas, while four or five days would be required to do the same with coal-gas retorts. The replies received from London, Liverpool, Belfast, Birmingham, Edinburgh, Blackburn, Stockport, and elsewhere were to the effect that they had not the "report of one single case of poisoning by gas inhalation other than would have occurred by the inhalation of ordinary gas." He also added the remarkable statement: "America was the home of carburetted water-gas, and there were no complaints there as to accidents arising from its proper use." The deputation was asked "to trust the committee in this matter." As it would have been out of order for the deputation to have made any comments on these statements Dr. Dixon Mann wrote next day to the papers, showing how they differed from the report of Dr. Abbott, secretary of the State Board of Health, Massachusetts. The report states that previously to 1878 fatal accidents from breathing coal-gas were very rare, and that up to that time illuminating gas was not allowed to contain more than 10 per cent. of carbon monoxide. This law was repealed and water-gas introduced to an unlimited extent. "The consequence was that in Boston alone, with 450,000 inhabitants, in the year 1890 more deaths took place from illuminating gas than had occurred from the same cause during the preceding fifty years," and "in 1896 no less than forty-three deaths from the same cause occurred in Boston. Dr. Mann is a little satirical on the "profound emphasis" with which the chairman informed the deputation that water-oil-gas and water-gas are two different things, and how he and many members of the committee seemed persuaded that the ignorance of the public at large was fully shared by the Manchester and Salford Sanitary Association, while the committee ignored the fact that water-oil-gas is a mixture of the two, "the poisonous property of water-gas being simply diminished proportionally to the amount of oil-gas which the mixture contains." As Dr. Mann remarks, the objections to the use of water-gas are not only that it may quickly cause fatal poisoning, but because of the loss of health and the actual disease it may produce by chronic poisoning. If this gas is used all gas-fittings must be kept absolutely gas-tight, which we know, taking one house with another, to be a very rare occurrence. Sober-minded people would probably think it better to extend the gasworks than to flood the mains with, and drive through every faulty pipe and leaky fitting, this insidious and deadly compound. We may point out that the question was discussed some years ago in the Report of THE LANCET Sanitary Commission on Gaseous Fuel[1] where some interesting particulars will be found as to the manufacture of oil-gas and water-gas, and the method of mixing these with ordinary illuminating gas.

IMPORTANT DECISION UNDER THE NOTIFICATION ACT

AN important case has just been decided in the Plymouth County Court. Dr. Clay, having in several instances been called in as a consultant in cases of infectious disease, has felt it his duty to comply with the terms of the Infectious Disease (Notification) Act, to the effect that "every medical practitioner ..... called in to visit a patient" shall forthwith notify; and he has, in consequence, sent in a notification certificate in addition to the certificate already sent in by the usual medical attendant. But the Town Council have refused to pay for these duplicate notifications, and hence Dr. Clay took friendly proceedings against them in order to test the validity of their action. The County Court judge, after considering his judgment, has held that Dr. Clay had the duty of notifying under the terms of the Act, quite irrespectively of the fact that the case had already been notified. In our articles as to "Difficulties under the Infectious Disease (Notification) Act," since issued in the form of a pamphlet, we dealt specially with the question of "Multiple Certificates Relating to the Same Patient," and we quoted the view of the Local Government Board to the effect that "if ..... two practitioners are in actual attendance on, or are called in to visit, a patient, whether at the same period or successively, and their attendance or visiting is connected with the medical treatment of the patient, both are in strict law required to send certificates of notification, and these must be duly paid for by the sanitary authority." We need not discuss the question further here, because we have, as already explained, dealt with it before; but we may add that if no second certificate were to be given as regards the same patient nothing would be easier in our large towns than to evade the purposes of the Act. Patients have more than once been moved into rooms some distance away in the same sanitary district in order to escape what their friends deem to be the needless intervention of the officers of the local authority, and a fresh medical practitioner is called in. If such a practitioner, though having knowledge that a notification certificate had been transmitted by the previous practitioner, failed again to notify he would be liable under the Act to be summoned and fined. Indeed, it would be difficult so to contrive a clause that would ensure all needed multiple certificates being transmitted, whilst eliminating such as are not strictly needed, and therefore the clause was drawn as it stands.

CHICAGO SCHOOLS AND MEDICAL INSPECTION.

WE have received the report of the first medical inspection of Chicago Schools, taken under the supervision of Dr. A. Reynolds and Dr. Reilly, the Commissioner and Assistant Commissioner of Health for the city of Chicago. The time covered by the report covers the periods from Sept. 3rd, 1896, to June 30th, 1897, inclusive. The number of children in attendance was 272,000, in 572 separate buildings, and the work was placed in the hands of eight medical inspectors. Day by day every medical inspector was notified of the existence and locality of any case of infectious or contagious disease in his district, "whereupon he proceeded at once to ascertain if the patient had been in attendance at any school; if not, his duties terminated with seeing that the case was properly isolated and the necessary precautions against spread of the contagion or infection on the premises and in the neighbourhood were duly observed. If, on the other hand, the patient had been attending school, the school was at once visited and taken charge of by the inspector so far as relates to carrying out and enforcing precautionary measures against further spread of the disease, to the remedy of insanitary conditions on the school premises, &c. In cases of diphtheria and scarlet fever the throats of the children in the same room as the patient were examined after the method of Dr. Durgin, the teacher was instructed to watch for certain symptoms and to report their appearance to the inspector, and other appropriate action was taken and surveillance maintained as long as deemed necessary." As to the vaccinal condition of the children, 914 school examinations were made, covering a total of 90,220 scholars, and 47,310 vaccinations or re-vaccinations were performed. Of reported diseases diphtheria was the most prevalent, 744 individual cases among school children leading to the discovery of 2619 cases at home. There were 231 school cases of scarlet fever and 745 home cases. Stomatitis was found to be so prevalent in many schools that the inspectors advised teachers to

[1] THE LANCET, Nov. 25th, 1893.

instruct pupils to bring their own drinking cups and to forbid the common practice of children sucking water taps. Numberless structural defects existing in school buildings were reported to the School Board and as far as possible remedied by them. Schools, as everyone knows, are a fruitful source of infection, and we congratulate Chicago upon the institution of regular inspection.

THE FLANNEL SHIRT CLUB.

IN THE LANCET of January 9th, 1897, we referred to the formation of this useful society, which has for its object the supply of flannel shirts to patients who may be discharged from hospital in a destitute condition. The first half year's report has just been issued, and we see from it that eleven metropolitan hospitals have participated in the alms of the society. Those hospitals which were not helped have guilds or funds of their own for the purpose. The first annual meeting was recently held at 5, St. James's-square, kindly lent by the Earl and Countess of Strafford. The Vice-president, Mrs. W. L. Courtney, made a graceful speech, and enthusiastic testimony was borne by many matrons and ward sisters to the benefits afforded to sundry necessitous male patients. We wish every success and prosperity to this society and may mention that shirts may be sent to Miss Lamport, 52, St. John's Wood-road, and subscriptions to Mrs. H. H. Clutton, 2, Portland-place, W.

THE THERAPEUTICS OF THE ANIMAL EXTRACTS.

THE complete success of the treatment of myxœdema by thyroid extract, which was introduced six years ago by Dr. George Murray, was naturally the beginning of a new era in therapeutics. The animal extracts have been extensively used for a large number of diseases, and the literature of the subject is already very extensive. But what has been established as to the value of this new form of treatment? A useful article by Dr. Francis P. Kinnicut in the *American Journal of Medical Sciences* of July well summarises the results up to the present time. What little appears to be established we shall state. The so-called successful results which remain and constitute a large part of the literature are such as are always reported of any new remedy to be followed only by disappointment. In cretinism the myxœdematous symptoms are readily removed by thyroid treatment. Bodily growth and mental development held in abeyance take place in a degree inversely proportional to the age. If the treatment is begun early in the disease the child will probably grow into a healthy adult. In a type of idiot somewhat resembling the cretin some improvement, physical and mental, has been obtained. Some benefit follows the treatment in goitre—especially in the h perplastic form. Large collections of colloid and cysts are not affected. But complete disappearance of the goitre has rarely been observed. In exophthalmic goitre an aggravation of the symptoms usually results. In obesity a loss of weight at the rate of from 2 lb. to 11 lb. a week is produced in some cases. After a time a limit is reached, beyond which further loss does not occur. As a rule, discontinuance of treatment is followed by relapse. In diseases of the skin the expectations entertained have not been fulfilled. In psoriasis definite results have been obtained in some cases; but even in these not better than by modes of treatment already in use. Of 43 cases of Addison's disease treated by suprarenal extract 6 were reported cured, 22 improved, 18 unimproved, and 2 aggravated. Thymus extract appears to be useless in exophthalmic goitre, but beneficial in the other form. Of 30 cases of goitre 20 were improved; but only 2 were cured. Of 13 cases of acromegaly treated with pituitary preparations 7 showed varying degrees of improvement, 5 none, and 1 became worse. In two the violent headache and neuralgic pains in the limbs were diminished. Decrease of the affected extremities occurred in one case.

AN INTERNATIONAL FIRE PREVENTION CONGRESS.

A MOST admirable movement is being organised which will meet, we are sure, with the hearty approbation of all. This is to call together an international congress to discuss the means to prevent and minimise fire in theatres, concert halls, and all other places of public resort where fire may be a source of danger. It is proposed to hold this congress in Paris, where it is hoped also that an international exhibition will be convened which shall illustrate all the appliances, inventions, products, and plans for the prevention of fire. We heartily recommend this proposal to those manufacturers, engineers, and inventors whose time and attention is devoted to the best means of preventing and suppressing fire, and we feel sure that they will be accorded every consideration, and that ample facilities for the exhibition of their appliances will be placed at their disposal in a building commensurate with the requirements and the merits of the exhibits. We repeat, the idea is an admirable one, and we wish it every possible success. Those whose interests are concerned and who have at heart the avoidance of those terrible disasters from fire, painful instances of which have occurred during the last twelve months, should cordially embrace the opportunity thus afforded them of doing a real service in the interests of the public, and should communicate with the British secretary, Mr. Frederick Hoare, of College-chambers, 249½, High Holborn. It is hardly necessary to add that the movement is very strongly supported in France, and we hope it will receive similar support here and in other countries.

THE RINDERPEST.

IN another column we publish a letter from Mr. H. A. Lawrance, F.I.C., in which he puts forward his position in connexion with the rinderpest controversy that is at present raging almost as severely as the disease itself in South Africa. Many of Mr. Lawrance's suggestions appear to have had little foundation, except on analogies between rinderpest and other diseases, but his letter bears evidence that he has followed the question with great care from the outset, and we think it a pity that he should not be allowed to give evidence before the Select Committee which is at present sitting at the Cape. We see, by the way, from recent telegrams that the Cape Government is now perfectly satisfied that Koch's method of preventive or protective inoculation is sound, and that under certain conditions good results may be expected from its use in affected districts. In the meantime the experts at the Cape are actively engaged in determining the exact conditions under which the bile and serum treatment is attended with the best results, and there can be little doubt that it is to these efforts that the good results obtained must, in part at any rate, be attributed. Whilst on this subject it may be well to point out that if Dr. Edington's statements as regards the persistence of the virulence of the infective agent in blood, mucus, &c., that have been desiccated hold good, we in this country should be on the outlook to prevent the introduction of the disease amongst our cattle through the medium of imported wool and hides. Due precautions are, no doubt, taken to sterilise the outer surfaces of bales of these commodities; but if the rinderpest organisms can retain their vitality in the dry wool and hair, the introduction of rinderpest from the Cape into this country may be simply a matter of time. A definite pronouncement on this point should be given at as early a date as possible, and we would

suggest that a definite report as to the dangers of this mode of infection should be drawn up immediately.

FORMATION OF GALL-STONES ON SUTURES LEFT AFTER CHOLECYSTOTOMY.

IN the *Boston Medical and Surgical Journal* of July 1st Dr. J. Homans records the following case. Cholecystotomy was performed on a woman and ninety-seven gall-stones were removed. The gall-bladder was united to the peritoneum by silk sutures and drained. The patient made a good recovery and remained free from symptoms until twenty months after the operation, when they began to recur. Cholecystotomy was performed again and seven gall-stones were removed; they were found to have crystallised round the sutures, which had become detached and had dropped into the gall-bladder. Though cholecystotomy has been now performed many times we do not know of any instance in which this accident has happened.

TINNED FOOD.

IT cannot be doubted that certain foods preserved in tins afford an auxiliary and convenient source of food-supply which cannot well be dispensed with, and, that being so, any suggestion calculated to ensure the wholesomeness of the food so preserved is entitled to every consideration. We do not believe that the mischief that now and again arises from the consumption of tinned food is referable to the presence of metal. Tin is a comparatively harmless metal, while the iron over which it is veneered is quite free from risk. The lead in the solder employed may, however, give rise to poisoning, but we believe that so well is the sealing process done that cases of this kind are rare. The dangers of tinned food generally arise from an inherent change in the food itself, and there is no doubt that the longer the food is preserved the greater is the chance of its being unwholesome, while, as is well known, as soon as the food thus preserved is exposed to the air certain changes rapidly set in, and for this reason the food should be partaken of as soon as possible after the tin is opened. Dr. Sykes, the medical officer of health of St. Pancras, makes what would appear to be a useful and practical suggestion in his annual report, which is that the law should provide that all tins containing tinned food shall have stamped upon them the date of tinning. Assuming that the correct date of tinning were thus stamped upon the tin the public would be able to judge in some measure of the wholesomeness of the contents, since it is reasonable to suppose that the enclosed food would not improve on prolonged keeping. We trust that the suggestion will be brought before the notice and consideration of the proper authorities.

EPSOM COLLEGE.

WE are glad to note from the annual report of the Royal Medical Benevolent College for the year ending May, 1897, that the institution shows steady progress. There is an increase in the sum received from annual subscriptions; the amount of donations is satisfactory, seeing that a festival was not held in 1896; and the sum received on school account is larger than it has been for many years. A legacy of £300 for the endowment fund has been received under the will of the late Dr. Henry Fearnside, of Bournemouth, and the residue of the testator's estate is to pass to the College for the same object after the decease of Mrs. Fearnside. The re-building of the chapel is being proceeded with. Four exhibitions or scholarships have been won by students of the College. The health of the boys has been, on the whole, excellent, and the school has been quite full throughout the year. We are glad to be able to congratulate the council upon the continued prosperity which their report shows, and can only wish that it may long continue. Founders' day was held on July 26th, when, in the unavoidable absence of Lord Lister, the Rev. T. N. Hart Smith, the head-master, presided. Among those present were Sir Joseph Fayrer (Chairman of the Council), the Rev. E. W. Northey (deputy chairman), Dr. Constantine Holman (treasurer), Dr. Charles Browne, Dr. Charles Drage, Mr. J. F. France, Dr. J. H. Galton, Mr. Reginald Harrison, Mr. Christopher Heath, Dr. F. Needham, Dr. A. E. Sansom, Mr. L. Smiles, and Colonel Gordon Watson. The chairman announced that during the year the College had exceeded any previous record in the distinctions gained by boys direct from the school. Addresses were delivered by Sir Joseph Fayrer, Dr. Holman, and Mr. Christopher Heath. In the course of the proceedings it was announced that a cheque had been received from Lord Rosebery defraying the debt on the organ which had been erected in the new chapel.

THE SELECT COMMITTEE ON PETROLEUM.

As might have been anticipated, the members of this committee, which has sat for a long time now, still find that their investigation is not complete. They were appointed to inquire into, and report upon, the sufficiency of the law relating to the keeping, selling, using, and conveying of petroleum and other inflammable liquids, and the precautions to be adopted for the prevention of accidents with petroleum lamps. It is regrettable that they have not yet arrived at any definite conclusions or recommendations, especially in regard to that clause in their inquiry relating to dangerous lamps. But it must be admitted that legislation in relation to the sale of lamps and oil will require the most serious consideration before any final plan can be adopted. Then, again, there is considerable diversity of opinion as to whether any extension of the Petroleum Act should apply to the construction of lamps or to the raising of the flash point of the oil. However, "at this late period of the session the committee are of opinion that it will not be in their power to conclude their investigation," so they have agreed "to report the evidence already taken to the House and to recommend that a committee on the same subject should be appointed early in the next session of Parliament." We regret that the committee have lost an excellent chairman in the person of the late Mr. Mundella.

THE MEDICAL WORK OF THE LONDON COUNTY COUNCIL.

THE address on the report of the London County Council for 1896-97 is of special interest to us on account of its being the first one delivered by the first medical chairman that body has elected. The works of the Council are so many and various that we have only space to mention those which more especially concern ourselves as medical journalists. And first on the list comes the Asylums Committee. The number of persons of unsound mind coming within the jurisdiction of the county of London is 13,526, as compared with 10 104 in 1890, and a new county asylum with 2000 beds is being erected at Horton Manor. Dr. Collins expressed a hope that before another year or so Londoners may expect the "excrescence of Holywell-street to be conspicuous by its absence." We do not see the use of pulling down Holywell-street unless the two churches of St. Mary-le-Strand and St. Clement Danes are sacrificed too, and even then Fleet-street and the Strand will be far too narrow for the traffic. Some of the host of omnibuses ought to be made to go along the Embankment and so relieve the congested streets. The Drainage Committee report that during the past year 2,184,500 tons of sludge were taken out to sea from Barking and Crossness and discharged into Barrow Deep, and we are glad to see that dredgings made at this spot gave no

evidence of sewage pollution. The Public Control Committee report that cases of glanders have fallen continuously from 2336 in 1892-3 to 867 in 1896-7, which is very satisfactory, as a number of such cases have been reported by the use of mallein as a diagnostic. The committee on inquests, &c., has been doing very useful work. In the words of the chairman, "arrangements have now been made, or are approaching completion, throughout all the districts in London, which will practically obviate the necessity for holding any inquest amid the desecrating surroundings of the public-house. In coöperation with the various sanitary authorities good mortuary accommodation has now been provided in nearly all districts. Such mortuaries are increasingly used for the reception of bodies awaiting interment in other than inquest cases. The public are recognising the advantage of the removal of dead bodies, during the interval between death and interment, from crowded houses to decent mortuaries, where sentiment is respected and sanitation satisfied." This is good news to us, for it is a point upon which we have insisted for years. We shall deal later with the report as a whole, and must congratulate Dr. Collins upon the successful work of the great body over which he has been called to preside.

THE VENOMS OF THE TOAD AND SALAMANDER.

IT has long been known that both the toad and salamander are of a venomous nature. Shakespeare, as everyone knows, refers to the toad as a source of ingredient in the mystical mixing of a charm-producing preparation, and in one instance to a toad which had "sweltered venom sleeping got." Pliny also says of the salamander that "of all venomous beasts there is none so hurtful and dangerous." In a very interesting paper on this subject in the July issue of *Science Progress* Dr. Hewlett shows that the employment of preparations of the toad as remedies for dropsy is not so absurd as may at first appear, for, as he has shown, a substance is secreted by the skin very like digitalin, and hence possibly having a favourable effect in cases of cardiac dropsy. It would appear that the active principles of the venoms of the toad and salamander are totally different substances from those of snake venom, the former being alkaloidal, while the latter are proteid in nature. Curiously enough, the venom of the toad and salamander is fatal to the animal which secretes it, only in comparatively large amounts. The salamander appears to be remarkably refractory to certain poisons; it is only completely "curarised" by forty-three milligrammes of curare, while morphine is apparently quite inactive. It was demonstrated by actual experiment that the salamander's blood and blood serum act as an antitoxin towards curare. The paper is a very interesting one, not only as tending to throw light upon the action of poison, but in also showing that the belief of the ancients in the venomous nature of the toad and salamander was not altogether devoid of foundation.

THE FORTHCOMING CONGRESS OF THE SANITARY INSTITUTE.

THE preliminary programme of the Sixteenth Congress to be held in Leeds from September 14th to 18th, has now been issued. The President of the Congress is Robert Farquharson, M D Edin, LL D. Aberd., F.R C.P. Lond., M.P., D.L., J.P. The congress will include three general addresses and lectures; three sections, meeting for two days each, dealing with (1) Sanitary Science and Preventive Medicine, presided over by T. Pridgin Teale, M.A., M.B. Oxon., F.R.C.S. Eng., F.R S.; (2) Engineering and Architecture, presided over by Lewis Angell, M. Inst. C.E., F.R I.B A.; and (3) Chemistry, Meteorology, and Geology, presided over by Wm. Whitaker, B.A., F.G.S., F.R.S.; and six special conferences, River Pollution, presided over by Major L. Flower, sanitary engineer, Lee Conservancy Board; Municipal Representatives, presided over by Councillor B. Womersley, chairman of the sanitary committee, Leeds City Council; Medical Officers of Health, presided over by Edward Seaton, M.D., F.R.C.P. Lond., F.C.S.; Municipal and County Engineers, presided over by Thomas Hewson, M. Inst. C.E.; Sanitary Inspectors, presided over by Peter Fyfe, F.R.S. Edin.; and Domestic Hygiene. In connexion with the congress a health exhibition of apparatus and appliances relating to health and domestic use will be held, and excursions to places of interest in connexion with sanitation will be arranged. These local arrangements are in the hands of an influential committee, presided over by the Lord Mayor of Leeds, with Dr. J. Spottiswoode Cameron, medical officer of health of the city, Mr. A. E. Pearson, M.R.C.S, L.R C.P. Edin., and Mr. W. Spinks, Assoc. M. Inst. C.E, as honorary secretaries. We understand that there are good reasons for expecting a large attendance.

CANCER CURERS.

MR. WILLIAM LENNOX WATSON is a lucky man. He is in possession of a receipt for the cure of cancer handed down from his father, and he gives his advice and the cure free—in which respect we must say he differs from the ordinary tribe of quacks. Like another celebrated benefactor, he does "good" by stealth, and blushes to find it fame, for, in explanation of his using the name of Hudson, he handed in a statement saying that he used and assumed the name because he was not proud of his connexion with the business. The cure consists of a plaster, in which the active ingredient is arsenic, and the plaster is to be applied to the skin after the epidermis has been removed by a blister. It is to remain on for fourteen days. Miss Blacker, for whose manslaughter Watson was indicted, against his instructions, kept the plaster on from May 13th until June 3rd, when she died from, as the post-mortem examination showed, arsenical poisoning. Absorption of the poison must have been rapid, for evidence was given that when in the train, returning to York on the day of application of the plaster, Miss Blacker was attacked with sickness and diarrhœa, which the accused stated in the letter was "quite the usual thing with the plaster." Mr. Justice Grantham summed up strongly in favour of the prisoner, and the jury returned a verdict of "Not guilty"—a verdict which appears to us to be absolutely wrong. Miss Blacker, we notice, was lured to her death by an advertisement in a religious paper. We have frequently commented before upon the way in which the so-called religious papers insert advertisements of quack remedies and those calculated to produce abortion, and we must say it is a disgrace for any paper, and especially a "religious" one, to prostitute its columns to such purposes. We can only express a hope that Mr. "Hudson" will not merely feel ashamed of his business, but will give it up for the future.

HEALTH OF THE ARMY IN INDIA.

WE think that all reasonable people may be congratulated on the altered tone which has of late characterised the discussion regarding the measures that should be adopted for limiting the spread of "the most serious, insidious, and lasting of all the contagious diseases that afflict humanity." As to the moral and religious aspect of the question, we have always contended that whatever might have been urged against the Contagious Diseases Acts, the benefit they conferred on the unfortunate women in this direction was very great. Detention in hospital gave an opportunity of their being reached by kindly moral influences and afforded them time for rest and reflection while their physical ailments were being treated. We know

of no better or more practical way of conveying philanthropic and Christian influences to them than by carrying these to their bedsides when sick. Then, again, the order and decency of our streets were improved and their temptations lessened, and a wholesome restraint was imposed upon many vain, giddy, and thoughtless girls by the fear lest their conduct should attract attention. The opponents of all legislative action in regard to the spread of these diseases appear to think that all physical measures are incompatible with moral and religious methods of dealing with the evil. We would commend to the attention of our readers the excellent and exhaustive letter from Mrs. Louisa Herbert, which appeared in the *Times* of the 17th inst., wherein it is wisely said that "practical religion is really sanctified common sense." The recent speech made by the Lieutenant-Governor of the Punjab, Sir W. Mackworth Young, on the new policy proposed to be adopted by the Indian Government in regard to this form of contagious disease is also worth reading as indicative of the view taken by a conscientious man of strong religious convictions. All this shows that there is, at any rate, a growing disposition to look the facts in the face—from a prudent as well as a merciful and Christian point of view.

THE EXPLOSIVES ACT.

THE annual report of Her Majesty's Inspectors of Explosives for the year 1896 is again satisfactory. There can be little doubt that in this department of control this country leads the way. This is evident from the fact that the Governments abroad are constantly inquiring into the working of our Acts with a view to the improvement of their own. The number of deaths from accidents by fire or explosion connected with manufacture during the year was one only, which, as the inspectors observe, marks an extraordinary and most satisfactory contrast with the figures which obtained before the Act came into operation This result is all the more satisfactory when it is considered that not only has the actual number of factories largely increased, but in many cases the amount of output of an individual factory also, and consequently the number of hands employed and the resulting chances of accident. Further, the risks attending the preparation of explosives that are quite new, to the manufacture of which a large proportion of the recently built factories are applied, are less well known than those connected with the more familiar explosives, and therefore they are not so easy to provide against. And these results have been accomplished without any undue or even inconvenient interference with the trade. The number of accidents in the various industrial applications of explosives shows also a considerable decrease, namely, 134 against 152. The number of deaths from accidents of this class shows also a decrease, namely, 33 against 40, the returns this year being slightly below the decennial average.

THE EPPING FOREST GIPSIES.

FROM time immemorial the forests of Epping and Hainault have been the resort of wanderers and outcasts, and at the present time certain parts of the forest are infested by tent- and van-dwellers, who voluntarily keep without the pale of civilised society, and are generally a nuisance to the inhabitants around. Many attempts have been made to clear them from the forest, but hitherto without result; they have removed from one part only to become a nuisance in another. In 1894 the Essex County Council made a series of by-laws to prevent tent-dwellers, squatters, gipsies, or other persons from using as a dwelling-place so as to cause annoyance, injury, or disturbance to residents in the neighbourhood any tent or van or similar structure placed on any land within two hundred yards of any highway or street or of any dwelling-place. These by-laws were to apply to the whole county, but the Secretary of State refused to sanction them save for that portion of the county which is situated within the metropolitan police district. The result has been that the southern part of the forest, which is within the police district, has been practically cleared of gipsies, whilst the numbers in other parts have increased. At Lambourne End, a portion of the old forest of Hainault, there are about 200 squatters, who are causing great anxiety to the authorities. The county council appears to be powerless, and all the efforts made by the Ongar rural district council to dislodge them have been of no avail. When legal notices of any kind are served upon them they simply pack up their tents and remove to another portion of the forest. At the last meeting of the district council the Lambourne parishioners drew the attention of the members to the large increase in the number of gipsies and to the great nuisance caused by them. After a considerable amount of discussion, during which the action of the Secretary of State was adversely criticised, it was decided that the surveyor should obtain the "names of the gipsies and serve them with notices to provide sanitary appliances and a proper water-supply." The clerk urged that it would be better to worry the Secretary of State, as when the notices were served on the gipsies they would remove to another district for a time and then come back. This is, no doubt, what will occur, and we cannot but think that if reasonable by-laws were framed and the whole facts of the case laid before the Secretary of State his formal approval would be obtained. Until this is done there is little hope of remedying the present disgraceful condition of Hainault Forest.

THE LOUGHBOROUGH MEDICAL AID ASSOCIATION.

THE above association has recently been advertising for a duly qualified medical officer, salary £400 a year, with midwifery fees, which average about £30 per annum (the per case fee being 10*s.*), and a residence. At first sight this would seem to be fairly good pay as things go, but the medical officer is expected to provide a duly qualified assistant out of his receipts. From the medical report for the year ending December, 1896, we learn that 9035 visits were paid and an average of 120 prescriptions a day dispensed. The total receipts of the association were £1169 14*s.* 2½*d.* Adding up all the items debited to medical expenses—viz., salaries, midwifery fees, cab fares, rates, taxes, drugs, dispensing, bottles, rent, coals, gas (which we count as being all for medical purposes)—we come to a grand total of £726 11*s.* 0½*d.* Deducting this from the total we have £443 3*s.* 2*d.*, and if, to be perfectly fair, we deduct the secretary's salary, £126, and the auditor's fee, £1 10*s*, we have £315 13*s.* 2*d.* remaining over. This sum ought to be divided among the medical officers, except some small portion to be regularly applied as a sinking fund against loans or legal expenses. The secretary, we see, is also dispenser, and considering that he dispensed some 43,000 prescriptions he cannot be considered overpaid. The official balance-sheet shows a balance of £176 odd, and in our opinion a society that makes a clear profit of, according to its own accounts, £176 odd out of medical aid and dispensing, with a gross expenditure of just under £1200, can only be called by one term—namely, a sweating society. By the rules the medical officers must give their whole time to the association and shall not engage in private practice either professionally or otherwise (whatever that may mean) and shall provide their own instruments. A medical aid association, as we have often said, is only to be justified where the medical officers have a voice in the management of the affairs, a right of objection to the admission of members earning above a

certain wage, and where the association does not tout for members. We do not see in this association why the medical officers should not receive the whole of the members' payments after deducting the cost of drugs and quarters, for the only benefit offered to members is medical service.

AT a recent meeting of the provisional committee of the movement for providing a memorial in Bristol of the late Mr. Greig Smith, it was resolved that in order to perpetuate the memory of the deceased surgeon an appeal should be made for subscriptions to provide a bust or medallion to be placed, if permission be obtained, in the Bristol Museum and Library or some other public institution; also that a medallion be placed in the operating room at the Bristol Royal Infirmary, and that the balance of the money collected be applied in assisting to carry out the scheme at the operation theatre drawn up by the late Mr. Greig Smith.

H.R.H. PRINCESS CHRISTIAN visited Norwood Cottage Hospital on July 16th, and then attended a garden party at the residence of the President, Mr. C. E. Tritton, M.P., where she received purses on behalf of the special Diamond Jubilee Fund in aid of the hospital. This fund was instituted early in the year, chiefly with a view to the support of the Hokkaido bed at the hospital and a bed at the Convalescent Home, Bexhill. It was stated that the subscriptions to it amounted to about £3000, a result which was largely due to the energy of Mrs. Gandy, wife of one of the surgeons.

AT the annual meeting of the St. Andrews Graduates' Association held at 11, Chandos-street, W., on Thursday, July 22nd, Dr. Cleveland, who had filled the office of chairman *pro tempore* since the lamented death of Sir Benjamin Ward Richardson, was elected President of the Council for the ensuing year. At the same time Sir Charles Gordon, K.C.B., and Sir Charles Gage-Brown were elected Vice-presidents of the Association.

WE regret to record the death, on July 22nd, of Dr. Henry Thompson at the advanced age of eighty-one years. Dr. Thompson at the time of his death was consulting physician to the Middlesex Hospital, having resigned the office of physician in 1879. He was also Senior Fellow of St. John's College, Cambridge.

THE medical service in State, under the auspices of the Guild of St. Luke, will be held this year in St. Paul's Cathedral on Oct. 19th at 7.30 P.M. The Archbishop of York will preach, and we are further informed that academical dress will be worn by members of the medical profession who are graduates.

THE Vice-Chancellor of the University of Cambridge (Dr. Alexander Hill) will preside at the annual distribution of prizes and certificates to the Students of the St. George's Hospital Medical School this year. The ceremony will take place in the new board-room of the hospital on Friday, Oct. 29th, at 3 P.M.

H.R.H. PRINCESS HENRY OF BATTENBERG, the Governor of the Isle of Wight, lays the foundation-stone to-day (Saturday) of the new buildings of the Royal National Hospital for Consumption and Diseases of the Chest at Ventnor.

THE proposals of the Indian Government with regard to the Secretary of State's despatch concerning the health of the troops in India have been published as a Parliamentary paper, and we hope to make some remarks thereon next week.

Pharmacology and Therapeutics.

ICHTHALBIN.

THE unpleasant taste and smell of ichthyol have, in England at least, presented serious obstacles to the internal use of this really valuable drug. Attempts have been made to disguise the odour by means of citronelle, coffee, and other substances, but unfortunately with only very partial success. The active principle of ichthyol is generally admitted to be sulpho-ichthyolic acid, which exists in it to the extent of 53 per cent. This acid Dr. Sack, of Heidelberg, has recently succeeded in combining with albumin, forming a brownish-grey powder insoluble in acids, but decomposed by alkalies. This substance has neither taste nor smell and contains 40 per cent. of sulpho-ichthyolic acid, so that three grains of it are about equivalent to four of ichthyol. It passes unchanged through the stomach, but in the alkaline media of the intestine it slowly breaks up into sulpho-ichthyolate of soda and peptone. It has proved useful in rachitis, anæmia, tuberculosis, syphilis, and in various intestinal affections, the digestion being improved, the bowels made regular, the appetite increased, and also—often to a remarkable degree—the body weight; in several cases of eczema in children, too, it has proved beneficial. Of course, it is hardly so well suited for external employment as ichthyol itself; nevertheless, it has been successfully applied to the anus for fissures and pruritus. The dose is said to be half a teaspoonful of the powder two or three times a day. It may be taken dry on the tongue and washed down with water or mixed with a little powdered chocolate in which way children like it best.

THEOBROMIN IN SENILE ASYSTOLIA.

Dr. Baronaki has found very great benefit from the administration of theobromin in cases of asystolia in old persons due to degeneration of the muscular walls of the organ. When, however, the asthenia depends upon lung or hepatic trouble this drug is of much less value. In order to obtain its full effect he puts the patient on a purely milk diet with 30 minims of tincture of digitalis *per diem* for four days. He then substitutes for the digitalis theobromin, which is prescribed in seven and a half grain powders every two hours during the daytime, so that six powders, or forty-five grains of theobromin, are taken during the twenty-four hours. The diuretic effects of this are generally observed after a few doses and the œdema and uræmic symptoms disappear. After this result has been obtained it is not advisable to continue the drug, as it is liable to produce sickness, giddiness, and mental excitement. It is best to order iodide of potassium, and then if the symptoms of asystolia reappear to repeat the course of digitalis and theobromin. In very grave cases, where the effect of the drug rapidly passes off and there appears to be danger in giving the digitalis too often, Dr. Baronaki has found the theobromin recover its diuretic power after venesection or scarification of the lower extremities. He has no doubt in his own mind that he has been able by this method to materially prolong the lives of several old persons who, from their appearance and symptoms, would, if treated in other ways, have very rapidly succumbed to an attack of cardiac asthenia.[1]

CARBOLIC ACID IN INFECTING CORNEAL ULCERS.

According to Dr. Geirsvold, a Norwegian practitioner, infecting ulcers of the cornea may frequently be very successfully treated by touching the surface with a Bowman's probe dipped in pure carbolic acid. Some of his cases were complicated by suppuration of the lacrymal ducts, and he was not obliged to use the thermo-cautery, curetting, or sub-conjunctival antiseptic injections.

SALICYLATE OF METHYL IN HERPES ZOSTER.

Dr. Chambard-Hénon of Lyons has found that the pain of herpes zoster may be very rapidly relieved by rubbing salicylate of methyl well into the healthy skin surrounding the eruption. In a case which he publishes he used eighty drops for each application. He lays waxed cloth on the surface and covers the whole with a layer of cotton wool and a bandage.

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[1] Semaine Médicale, p. 260.

THE TWELFTH INTERNATIONAL MEDICAL CONGRESS.

MOSCOW: AUGUST 19TH—26TH.

Former Congresses.—The Beauties of Moscow.—"Our Lady of Vladimir" and the Ikon painted by St. Luke.—Biographical Notes of the Organisers of the Moscow Congress.

EXACTLY thirty years have passed since the first International Medical Congress was held. It was in Paris in 1867, when the earliest of those great exhibitions for which the French capital has since become so famous was about to be opened, that the idea arose of summoning such a conference. About five hundred medical men from foreign countries responded to the invitation, and in this modest way the series of triennial gatherings was inaugurated. Had the triennial interval been observed from the beginning the Congress which is about to meet in Moscow would have been the eleventh instead of the twelfth of the series. But it will be seen from the following little table that at first the interval between the successive gatherings was only two years, the change to three years having been made only in 1881. On two occasions the Congress has had to be postponed; in 1871 no Congress was held on account of the Franco-German War, and in 1893 the gathering was put off for one year on account of the cholera epidemic then prevailing.

Table giving the Dates, Places of Meeting, and Names of Presidents of the Previous Congresses.

Number of Congress.	Date.	Place of meeting.	Name of President.
First	1867	Paris.	Professor Bouillaud.
Second	1869	Florence.	Professor Salvatore de Renzi.
Third	1873	Vienna.	Professor Rokitanski.
Fourth	1875	Brussels.	Professor Vleminckx.
Fifth...	1877	Geneva.	Professor Karl Vogt.
Sixth	1879	Amsterdam.	Professor Donders.
Seventh	1881	London.	Sir James Paget.
Eighth	1884	Copenhagen.	Professor Panum.
Ninth	1887	Washington.	Professor Nathan Smith Davis.
Tenth	1890	Berlin.	Professor Virchow.
Eleventh... ...	1894	Rome.	Professor Baccelli.

The Twelfth Congress will be held in Moscow in this present year of grace between the dates of Aug. 7th (19th) and Aug. 14th (26th), the first dates being O.S. The President of the whole Congress has yet to be elected, but it may not be rash to prophesy that the choice will lie between Professor Skliffosowski and Professor Klein, the joint presidents of the Organising Committee. It will be observed that the number of European countries in which congresses have not yet been held is a rapidly diminishing one. At the last congress but one invitations for the present gathering were offered by the representatives both of Russia and of Spain, neither of which countries have as yet been the scene of congresses. The Russian invitation was accepted. The question whether the meetings should take place in Moscow or St. Petersburg was left entirely to the discretion of the Russians, and there can be little doubt in the mind of anyone familiar with the two cities that the choice of Moscow has been in every way the right one. Not but that, in the absence of a rival capital, St. Petersburg would have made an admirable centre for an international gathering of medical men. Lying proudly on the reclaimed banks of the Neva, with her massive palaces and cathedrals standing as firmly as if they were built upon rock instead of upon millions of piles driven into a marshy soil, she is the very type and embodiment of the triumph of man over the adverse forces of Nature. She can offer many sights of interest, and even of beauty, and for medical men the attractions in the way of large hospitals, cliniques, and scientific institutions of all kinds are numerous. But St. Petersburg is not Moscow. It is, perhaps, not without significance that in writing of great cities we should unconsciously speak of them in the feminine rather than in the neuter gender. A great city has a distinct physiognomy of its own, and in this, as in a woman's face, one instinctively looks for character and beauty. In both of these attributes Moscow is richer, not only than St. Petersburg, but than most other cities of the world. To have seen Moscow once is to acknowledge this—that to realise to the full her curious beauty and power of fascination she should be seen many times, under varying conditions as it were, in all her different moods. Moscow seen under an almost tropical July sun, when the Kremlin Hill, with its gold-capped cathedrals and towers and palaces, literally glitters like a gem-covered crown set in an enamelled field of red and green and gold and purple (for in such bright colours are the roofs of churches, houses, and monasteries painted), is one thing; but Moscow in winter, in a raging snowstorm, when the silence of the streets, the drifting clouds of grey powder, and the soft white covering which for a time blots out or tones down the occasionally too brilliant colours of tower and roof, lend an air of mystery to the scene, is another and no less beautiful thing. Moscow should be seen, if possible, at night, when the moonlight plays curious tricks with the gold domes and fantastic lights and shadows of the Kremlin. She should be seen (but this sight occurs but once in a lifetime) when, as in May of last year, the city has adorned herself in the most lavish decorations to welcome the Czar and Czaritza on the occasion of a coronation, and when the spectator is led to question which is the more beautiful, the city or the pageants enacted within her walls. And, lastly—perhaps the most wonderful sight of all—Moscow should be seen illuminated, with every tower and spire and wall and dome covered with a million lights, as on the three nights following a coronation. To have seen this in the warm twilight of a northern summer night is to have seen a spectacle such as few other cities could present. She will be in more sober guise next month, as befits the occasion of a learned gathering such as the Medical Congress and the part of hostess which she will be called upon to play. True to the traditions of Russian hospitality, Moscow has already made great preparations for the reception of her numerous visitors, and there can be little doubt that the coming Congress will yield to none of its predecessors in the care of the hosts to provide for the comfort and enjoyment of the guests.

But Moscow is not less historically interesting than she is externally beautiful. The city is thought to have been founded in the year 1147 by Prince George Dolgorukof, a son of Vladimir Monomach, who had married Gytha, the daughter of our own Saxon King Harold, the first and only Russian ruler who has married a purely English princess. It was in the fourteenth century that Moscow became the capital of Russia. Kief, the earliest capital, had given way to Vladimir, Vladimir was succeeded by Tver, and Tver yielded to Moscow in the reign of the first Ivan. It was this prince who made of Moscow a great city, and there are many traces of him still left. Two of the three cathedrals, those of the Assumption and of the Archangel Michael, were built by him almost as they now stand on the top of the Kremlin Hill. The further history of the city can scarcely be told here, full of interest though it is, without encroaching upon too great a space. Moscow has had to contend with many disastrous visitations—Tatar and Polish invasions, plague, fire, and famine. But she gallantly survived them all, and it was only at the beginning of the eighteenth century that she had to yield some of her laurels and privileges to her young rival, the new city built by Peter the Great, where the Neva flows into the Finnish Gulf. The submission has, however, been more apparent than real. It was at Moscow rather than at St. Petersburg that Napoleon struck his terrific but ineffectual blow in 1812, when the greater part of the city was voluntarily sacrificed to fire in order to save the country from falling into the hands of the enemy. And Moscow is still the *pervo-prestolnaia*, or primary capital of the Empire, the city where the Czars are crowned and christened, although the place of burial has long since been removed to the fortress church of St. Peter and St. Paul in St. Petersburg.

The great centre of interest in Moscow is the Kremlin. "What is the Kremlin?" is a question constantly asked. It should rather be, "What is a Kremlin?" Moscow is not unique in possessing one; they are to be found in several other old Russian towns—in Kazan, for example, and in Nizhni-Novgorod. But none of these have obtained the wide fame of the Moscow Kremlin, and deservedly so, for

none can compare with it in size and magnificence or in historical interest. There is some doubt as to the exact meaning of the word itself; but it is thought to be derived from the same root as the word *Krépost*, a fortress, and the word *Krépkir*, strong. The Kremlin in Moscow is more than a fortress; it may best be described as an enclosed space, some two miles in circumference, surrounded by splendid walls, from twenty to fifty feet in height, with curious, almost bizarre, towers and gates at intervals. Within the enclosed space are found a number of important buildings, the "palais de justice," the arsenal, the Imperial palaces, old and new, more than one monastery and convent, the treasury of the Holy Governing Synod, the Bell-tower of Ivan Veliki (or Ivan the Great), the famous Great Bell of Moscow, and last, but not least, the three cathedrals, which, with bell-tower, crown the hill upon which the Kremlin is built. These three curiously beautiful churches represent, as it were, an epitome of the lives of the Czars. In the Cathedral of the Annunciation, the *Blagoviéshtchinski Sobor*, they are christened and, in accordance with the custom of the Eastern Church, receive the Communion immediately after the baptismal rite. In the Cathedral of the Assumption, the *Uspienski Sobor*, the Czar crowns first himself and then the Czarí'za. In the Cathedral of St. Michael the Archangel, the *Archangelski Sobor*, all the ancient Czars of Muscovy, down to the time of Peter the Great, lie buried.

The external aspect of the three miniature cathedrals is impressive and dignified, and this is particularly so in the case of the Cathedral of the Assumption, the largest of the three, whose tall, plain, white walls are relieved in their upper part by bright Byzantine frescoes. But the most lavish decoration has been reserved for the interior of the churches There can be few more beautiful things in Eastern Christendom than the interior of the *Uspienski Sobor*. The central of the five domes is supported by four pillars; and walls, domes, and pillars are entirely covered with frescoes. The effect is one of great richness and beauty. In preparation for the coronation of last year the whole series of frescoes was thoroughly cleansed and restored. The work was done with great care and judgment and under the auspices of the most learned and judicious authorities upon this beautiful art, so that the restoration, which was held to be a necessity, could not in all probability have been better carried out. And yet we may be pardoned perhaps for regretting the richer and more sombre effect that time, and doubtless a generous layer of dust, had lent the coloured surfaces before they were touched by the hand of the renovator. The *ikonostas* is, and always must be, one of the most beautiful features of the church. This, the great screen covered with ikons, or painted religious pictures, stretches across the cathedral from side to side, and divides the body of the church from the sanctuary behind it. There are five tiers of paintings in the screen, set in a gold framework, and some of them almost covered with gold, so that the hands and faces of the painted figures alone remain visible. In the lowest tier are many of the most famous ikons in Russia. Some are undoubtedly of a great age, and most of them have played a part in the history of the country. Like the frescoes on the walls, the figures are for the most part curiously stiff and archaic, but none the less full of that devotional character found in all Byzantine Christian art. Most venerated of all the ikons is a small one enclosed in a gilt shrine, and not always open to the inspection of the curious. The thick incrustation of rough-cut jewels with which it is covered indicates the veneration with which it is regarded by the rich; the worn look of the metal work just underneath the figure, where thousands of lips have been pressed in the act of kissing, show the respect and adoration paid to it by rich and poor; and the black, indistinguishable features and outlines of the painting are proof of its great age. It is even said to have been painted by the physician-evangelist, St. Luke himself, and so may be regarded with double interest by the followers of his honourable profession. The ikon represents the Madonna and child, and is known as the "Vladimir Mother of God" (*Vladimirskaia Bojaia Matj*); its shrine is on the left of the central doors of the ikonostas.

All the three cathedrals are rich in tombs and relics. Three of the four great historical patriarchs of Moscow, St. Peter, St. Jonah, and St. Philip, lie buried in the corners of the *Uspienski Sobor*. The Cathedral of the Archangel is full to overflowing of the velvet-covered sarcophagi of the ancient Czars. There are no tombs in the Cathedral of the Annunciation, but there is a most wonderful collection of saintly relics in this church—ulnas and tibias, carpal bones, and femurs in abundance, and many other parts of the human body, each in its own niche of large gilt and glass-covered cases. Each is inscribed with the name of the saint of whose earthly frame it once formed a fragment, and whose more spiritual part is long since "with the saints, we trust."

It is difficult not to linger in and about the cathedrals of the Kremlin. But there are a number of other interesting sights to be seen; there is the Bell Tower of Ivan Veliki to be climbed for those who are energetic enough to mount many hundreds of steps for the sake of a really fine view. There is the palace, of which the superb modern rooms and curious and interesting old rooms (in the so-called "*Terem*") ought certainly to be visited by a conscientious sightseer, who (like all conscientious sightseers) will be well rewarded for his pains. The Treasury of the Kremlin (*Orujeinaia Palata*) and the Treasury (*Riznitza*) of the Synod contain a wealth of beautiful things which must on no account be missed. The *Czar Kolokol* and *Czar Pushka* ("King Bell" and "King Cannon") are of such a size that they can scarcely be passed by unnoticed. Just outside the Kremlin is the extraordinary church of *Vassili Blajennui*, built by Ivan the Terrible, who, so runs the story, put out the eyes of the architect that he should never build another church to rival it. But for these and all the other sights of Moscow the reader must turn to the pages of his faithful "Murray," where he will find all possible information and help that he can require. Enough has been said to prove beyond question that, with so many interesting things to be seen in the intervals between the more serious labours of the Congress and the social engagements in connexion with it, no one who goes to Moscow this August need fear that time will hang heavily upon his hands.

The Russian Committee of the Eleventh International Congress, held in Rome three years ago, was presided over by Professor Pashutin, whose name has already been mentioned in these columns. When the Russian invitation to hold the next congress in the Empire of the Czars was accepted, Professor Pashutin formally addressed the Medical Faculty of the University of Moscow with the request that it would undertake the far from light duties of organising the Congress. The Faculty accepted the proposal, and a "Preliminary Commission," consisting of seven of the leading medical professors, was formed. In September, 1894, the Organising Committee of the Congress, consisting of all the professors in the Medical Faculty, under the presidency of the Curator of the Moscow Educational District, came into existence; and at the same time the executive committee, of eight members, under the presidency of the Dean of Faculty, Professor Klein, was elected. The executive committee consisted, in addition to the president, of Professor Kojevnikof, vice-president; Professor Erismann, general secretary; Professor Filatof, treasurer; Professor Diakonof, Professor Neiding, and Professor Tikhomirof, all with the title of secretaries; and Professor Oströumof and Professor Korsakof as members. In October of last year several changes were made in the constitution of these committees. The curator of the Educational District retired from the presidency of the organising committee, and was succeeded by Professor Skliffosowski; but in view of the fact that the new president resides in St. Petersburg (where he is in charge of the Helena Clinical Institute), Professor Klein was appointed joint president with him. Professor Roth succeeded Professor Erismann as general secretary, and Professor Ognef and Professor Shervinski were added to the executive committee from which Professor Oströumof had retired. It should also be stated that a large number of names had in the meantime been added to the organising committee, including those of the Rector of Moscow University, the mayor and vice-mayor of Moscow, Dr. Pashutin of St. Petersburg, Dr. Ragozin, the director of the Medical Department, Dr. Anrep, of the Women's Medical Institute, Dr. Lukianof, of the Imperial (once the Oldenburg) Institute of Experimental Medicine, Dr. Kudrin for the navy, Dr. Remmert for the army, and a large number of other prominent persons whose names are too numerous to mention.

The Congress was almost from the first under the patronage of His Imperial Highness the Grand Duke Serge, whose name is familiar to all Englishmen, and whose tall and commanding figure must have been seen by not a few at the time of the recent Jubilee, when, as on the like occasion in 1887, Russia was represented by him. The Grand Duke Serge is Governor-General of Moscow, and is married to a grand-daughter of the Queen, the Princess Elizabeth of Hesse, who is also a

sister of the present Czaritza. Last winter His Majesty the Czar was graciously pleased to become a patron of the Congress, and he has still further shown his interest in it by consenting to receive deputations from all the countries represented at the Congress.

FIG. 1.

His Imperial Majesty the Czar of Russia, "High Protector" of the Congress.

The necessary expenses in connexion with the Congress were soon guaranteed. The Government granted an initial sum of 50,000 roubles, which has since been increased to 75,000 (equivalent to about £8000). The municipality of Moscow has also voted generous sums of money, and these have been increased by votes from the Government *zemstvo*

FIG. 2.

His Imperial Highness the Grand Duke Serge Alexandrovitch, "August Patron" of the Congress.

of Moscow and other sources. In addition to this, the Russian railways, nearly all of which are now under State management, have arranged to grant free railway tickets to Russian members of the Congress from any part of the empire, and to foreign members from any frontier town to Moscow and back.

The Office-bearers of the Congress.

Professor Nikolai Vasilievitch Skliffosowski, the President of the Organising Committee of the Congress, and one of the foremost of Russian surgeons, was for many years associated with the University of Moscow, but four years ago he accepted the appointment of Director of the Helena Clinical Institute in St. Petersburg, an institution which was recently briefly described in the pages of THE LANCET.[1] He is a native of

FIG. 3.

Professor N. V. Skliffosowski, Joint President of the Organising Committee of the Congress.

the "government" of Kherson, and a graduate of the University of Moscow, and for the five years immediately succeeding his graduation was surgeon to one of the large municipal hospitals in Odessa. After spending some time abroad in visiting the surgical schools of Germany, France, and England, Dr. Skliffosowski returned to Russia, and soon obtained the Chair of Surgery in the University of Kief. Two years later he was transferred to the corresponding chair in the Army Medical Academy in St. Petersburg. This appointment he held for ten years, and during this period two great European wars

FIG. 4.

Professor I. F. Klein, Joint President of the Organising Committee of the Congress and President of the Executive Committee.

occurred—the Austro-Prussian War of 1866 and the Franco-Prussian War of 1870–71. In both cases Professor Skliffosowski went to the seat of war and took an active share in the campaigns. In the Russo-Turkish hostilities of 1877 he took a no less prominent part in the capacity of "consulting surgeon" to the army of occupation on the Danube. In 1879 he was appointed Professor of Clinical Surgery in the University of Moscow. During eight of his fourteen years' tenure of this chair he was also Dean of the Medical Faculty. In 1893 he was transferred, as already mentioned, to St. Petersburg. Professor Skliffosowski has the honourable

[1] THE LANCET, July 3rd, 1897, p. 35.

title of Privy Councillor, and he is the author of many monographs on surgical subjects.

Emeritus Professor Ivan Feodorovitch Klein, joint President with Professor Skliffosowski of the Organising Committee, and President of the Executive Committee of the Congress, is a native of St. Petersburg, but a graduate of Moscow. He finished his curriculum in the University of Moscow in 1861, and has never since broken his connexion with his *alma mater*. For three years he was assistant to the Professor of Pathological Anatomy; during 1864–69 he was prosector attached to the same chair; and since the year 1869 Dr. Klein has himself held this professorship. From 1869 to 1878 he was prosector in the hospital for suckling children attached to the great Foundling Hospital in Moscow; and for many years he filled the same post of prosector (or pathologist) to the Old Catherine Hospital, the hospital which formerly served as the University clinique. During 1870–78 Professor Klein was secretary to the Medical Faculty of the University of Moscow, and during 1878–80, and again from 1888 to the present time, he has been dean of this faculty. Professor Klein's published writings are numerous, and deal mostly with pathological subjects. Among them may be mentioned essays on "Thrombosis, Embolism, and Ichorræmia" (1863), on "The Etiology of Malignant Tumours" (1868), on "The Histology of Small-pox" (1869), on "Pelvis Spandylolisthetica Mosquensis" (1870), on "Hydrocephalus" (1871), on "Pericarditis" (1881), on "Disseminated Sclerosis" (1882), and many others. Professor Klein is also a Privy Councillor.

Professor Alexis Jacovlevitch Kojevnikof, Vice-president of the Organising Committee of the Congress, is a distinguished neurologist and alienist. A native of Riazan, Dr. Kojevnikof graduated in the University of Moscow in 1858. In 1860 he was elected assistant physician in the medical wards of the clinique, and three years later obtained a scholarship enabling him to carry on researches in the University laboratories and wards for a period of two years. In 1865 he took his M.D. degree, and in the following year was sent abroad at the charge of the University to spend three years in scientific work in other countries. He had already made the nervous system an object of special study, and in his three years abroad he worked under the first neurologists of the day in France, Switzerland, Belgium, Holland, and England. On his return to Russia he was appointed *privat-docent* in the nerve wards of the old clinique in Moscow. Neurology had at that time scarcely gained the position of an independent specialty, and Dr. Kojevnikof was the first professor of neurology appointed in any Russian university. When in 1884 the new university cliniques in

FIG. 5.

Professor A. J. Kojevnikof, Vice-President of the Executive Committee of the Congress.

Moscow were constructed the neurological and psychiatric wards were the first to be completed. In 1892 the Kojevnikof Neurological Museum in connexion with the cliniques was opened. It consists of a fine collection of anatomical and pathological preparations made by Professor Kojevnikof, and has been named after him. He was also instrumental in founding two large lunatic asylums—one of 400 beds, under the municipality of Moscow, and one of 600 beds, under the Moscow Government *zemstvo*. His influence as a teacher is shown by the fact that some years ago a small club was formed of the pupils and assistants of Professor Kojevnikof; and on the occasion of his twenty-five years "jubilee" the members dedicated to him a volume containing nineteen original essays on neurological subjects written by themselves. This club formed the nucleus of the "Moscow Society of Neuro-pathologists and Alienists," of which Professor Kojevnikof was elected the first president, an office which he still retains. He is a member of a large number of Russian medical societies and also of the Imperial Archæological Society, and a corresponding member of the Société Medico-Chirurgicale in Paris. His writings are numerous; they include observations on aphasia, lateral amyotrophic sclerosis, ophthalmoplegia, alcoholic paralysis, acromegaly, epilepsy, bulbar paralysis, and many other subjects (physiological, pathological, and clinical) connected with the nervous system. Many of his essays have been published in French and German as well as in Russian journals.

Professor Vladimir Karlovitch Roth, the general secretary of the Congress, is a native of Orel, and a graduate of Moscow, where he gained a gold medal for his prize essay upon Jaundice. He completed his curriculum in 1871, but remained in the university, working in the wards and laboratories of Professor Kojevnikof. Professor Roth had from the first devoted himself to the study of diseases of the nervous system, and in 1877 he went abroad for three years, visiting Paris, Berlin, and Vienna, hearing the lectures of the most renowned neurologists of the day, Broca, Claude Bernard, Charcot, Leyden, Frerichs, and others, and working in the laboratories of Vulpian and Virchow. In 1881 he was

FIG. 6.

Professor V. K. Roth, Secretary-General of the Congress.

appointed physician to the nervous wards of the Old Catherine Hospital in Moscow; in 1891 he became assistant physician to the New Cliniques for Nervous Diseases; and in 1894 he was elected Extraordinary Professor of Neurology, the chair which he still holds. Professor Roth has published a large number of essays and observations on subjects connected with his speciality. In 1895 was published the first volume of his large and admirably illustrated work on "Progressive Muscular Atrophy," a subject which he has made his own, and upon which he has written a large number of articles and essays elsewhere. Lateral sclerosis, cerebro-spinal gliomatosis, acromegaly, myxœdema, neuralgia paræthetica, are some of the other subjects upon which Professor Roth has written, and in 1889 he described a new form of thermo-æsthesiometer in the pages of the *Progrès Médical*.

Professor Victor Vasilievitch Pashutin, as Director of the Army Medical Academy in St. Petersburg, and President of the Medical Council, fills two of the most honourable appointments obtainable in the profession in Russia. A native of Novotcherkask, in the territory of the Don Cossacks, he passed his student life in the Academy of which he is now the head. Even as a student his leaning towards the special

subject to which he afterwards devoted himself—namely, experimental physiology and pathology—began to show itself, and before he had qualified he published observations which he had made in the laboratories of the Academy. He obtained the title of *lékar* in 1868 and the degree of M.D. in 1870. In the following year he was sent abroad at the cost of the Academy to work in foreign laboratories for three years. His selection by the Academy for foreign travel was itself an honour of no mean kind; such selection is almost always the forerunner of a successful career, and in the majority of cases leads to a professorship in the future. Professor Pashutin worked principally while abroad under Ludwig and Huppert in Leipzig and under Hoppe-Seyler and Recklinghausen in Strasburg. During this period he published a large number of physiological observations, principally in German journals. In 1874 he was appointed Extraordinary Professor of General Pathology in the University of Kazan. In 1879 he was transferred to the corresponding chair in St. Petersburg, which he held until further promotion in 1890 compelled him to resign it. In 1885 he was appointed Scientific Secretary of the Academy, and in the same year he was elected a member of the council of the Ministry of Public Instruction, where his weighty advice, particularly upon matters relating to medical education, has often been of great service to the

FIG. 7.

Professor Victor Vassilievitch Pashutin, President of the Medical Council, and Director of the Imperial Academy of Military Medicine in St. Petersburg.

profession. In 1890 he was appointed by Imperial command to the office of *Natchalnik* (Principal or Director) of the Army Medical Academy, an appointment which he still retains. In 1889 Professor Pashutin was elected a member of the Medical Council, the highest authority upon medical matters in the country; and in December of the same year he was named by Imperial command the President of the Council in succession to the late Dr. Zdekauer. He is honorary member of a large number of Russian medical societies in all parts of the empire. In 1896 he received the title of Privy Councillor. Professor Pashutin has been the recipient of several orders—the Stanislas of the First Class, the St. Anne of the First Class, and the Montenegrin order of Prince Danilo I. At the last two International Medical Congresses he has been the President of the Russian National Committee, and he is a member of the Organising Committee of the present Congress. Professor Pashutin's published works include two volumes of "Lectures on General Pathology" (1878 and 1881); a large and valuable work entitled, "Course of General and Experimental Pathology," two volumes of which have been issued, and which he hopes to complete this autumn; and some ninety essays and articles on many physiological and pathological subjects.

Professor Niel Feodorovitch Filatof, the treasurer of the Congress, is a native of Penza. He graduated in the University of Moscow in 1869. After spending some years abroad in Vienna and Prague he returned to Russia and devoted himself entirely to the subject of diseases of children. In 1876 he was appointed *privat-docent*, and in 1891 Professor of Pediatrics in the University of Moscow, and this chair he still holds. Professor Filatof's writings include a volume on "The Semeiology and Diagnosis of Diseases of Children," which has had four Russian editions

FIG. 8

Professor N. F. Filatof, Treasurer of the Congress.

and been translated into German, Hungarian, Czech, and Italian; "Infectious Diseases in Children"; a "Manual of Children's Diseases," which has reached a third edition; "Diseases of the Digestive Tract in Children"; and many other contributions to the subject of pediatrics.

Professor Peter Ivanovitch Diakonof, one of the secretaries of the Congress, was born in Orel, and is a graduate of the Army Medical Academy in St. Petersburg. In 1888 he was appointed *privat-docent* to the chair of Operative Surgery and Topographical Anatomy in the University of Moscow, and in 1893 was elected to the professorship in this subject. Professor Diakonof is also consulting surgeon to several of the large general hospitals in Moscow; he is president of the Moscow Surgical Society; editor of *Chirurgia*, a monthly magazine devoted to the subject which gives it its title; and author of many essays and observations upon surgical subjects.

We hope that the foregoing brief biographical notices of the organisers of the Moscow Congress will be of interest to our readers. Next week we shall issue a special and very fully illustrated supplement dealing with the History, past and present, of Medicine in Russia.

ADMISSION OF THE PRINCE OF WALES TO THE HONORARY FELLOWSHIP OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.

WE have received the following official account of the proceedings at Marlborough House on July 19th, on the occasion of the admission of H.R.H. the Prince of Wales to the Honorary Fellowship of the Royal College of Physicians of London, which we have much pleasure in publishing. In reference to our remark, in a leading article last week on the subject, that "it had been an open secret in medical circles for some weeks that His Royal Highness might soon be expected to become a member of our profession by accepting a diploma from the College," it is now publicly stated that the Prince of Wales's election dates from a Comitia held on April 29th of this year.

The President (Sir Samuel Wilks, Bart.), the four Censors (Dr. Church, Dr. Cayley, Dr. Bastian, and Dr. Payne), the Treasurer (Sir Dyce Duckworth), and the Registrar (Dr. Edward Liveing) attended by appointment at Marlborough

House in their College robes, accompanied by the Bedell with the College insignia.[1]

On the entrance of the Prince, after the officers had been presented to him, the President addressed His Royal Highness as follows:—

"Sir,—We, the President and principal officers of the Royal College of Physicians, have assembled here, in compliance with an intimation received of your Royal Highness's pleasure, to admit you to the Honorary Fellowship of our College, which you have been graciously pleased to accept.

"In fulfilment of my duty as President, and in accordance with the usage of the College, I have to ask your Royal Highness to give your assent to a declaration, which is in these terms: 'You give your faith that you will, as far as in you lies, maintain the honour and defend the rights of the College unimpaired.'"

The Prince willingly gave his assent, and then subscribed his name to the same form of words inserted in the Register of Fellows.

The President, again addressing His Royal Highness, formally admitted him a Fellow in the following words: "I, Samuel Wilks, President of the Royal College of Physicians of London, admit your Royal Highness Albert Edward, Prince of Wales, to the Honorary Fellowship of our College"; and, taking the Prince's hand, wished him "all happiness" in the name of the College.[2]

The Prince was then presented with a diploma on vellum, illuminated with the College arms, contained in a case of red morocco, and with a gold-headed cane, after the fashion of those formerly carried by physicians, with a vinaigrette in the head to ward off infection. These were graciously accepted and courteously acknowledged by His Royal Highness.

The following is the text of the diploma:—

SCIANT OMNES NOS,

SAMUELEM WILKS, Baronettum, Medicinæ Doctorem et Præsidentem Collegii Regalis Medicorum Londinensis, una cum consensu Sociorum ejusdem Collegii, auctoritate nobis a Domino Rege et Parliamento concessa, in Societatem nostram, honoris causa, cooptasse virum illustrissimum ALBERTUM EDVARDUM, Walliæ Principem, Cornubiæ Ducem, Nobilissimi Ordinis Periscelidis Equitem. In cujus rei fidem et testimonium Sigillum nostrum Commune præsentibus apponi fecimus.

Datum Londini in Collegio nostro die vicesimo nono mensis Julii, annoque Domini Millesimo octingentesimo nonagesimo septimo.

The President then addressed the following concluding words to the Prince: "And now, with your Royal Highness's permission, I should like to add a few words to my formal duties. Standing here as the representative of this ancient and learned body, I desire to assure your Royal Highness that the announcement of your willingness to join our Fellowship was received with the greatest enthusiasm and satisfaction by the Fellows. For remembering, as we do, that our College received its first Charter from the hands of King Henry VIII., and that the illustrious Harvey, who may be regarded as its second founder, was on terms of friendship with King Charles I.; and that during the two centuries which followed our annals show the close connexion which existed between many of our eminent Fellows and the Royal Family, until we reach the time when, through the influence of our President, Sir Henry Halford, with King George IV., the site of the present College was secured to us from the Crown; and that on the completion of the edifice its inauguration took place under the auspices of the Royal family, the Duke of York, accompanied by the other Royal dukes his brothers, being present on the occasion, and the King graciously conferring that day on our President the star of a Knight Commander of the Order of Hanover,—when we recall, I say, all those events it must be evident to your Royal Highness with what satisfaction the College sees that there is no abatement in the kindly feeling which has ever been shown towards us by the Royal Family, but that it is perpetuated by your illustrious name being now enrolled in our annals."

The Prince in courteous terms expressed the pleasure it gave him to be connected with so ancient and honourable a corporation, and then took leave of the President and officers.

[1] The mace and cushion; the College statutes, bound in velvet, with the Corporation seal attached; and the caduceus of Dr. Caius.

[2] The "omnia fausta precor" of the old Latin form.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

AN exhibition of very general interest to the profession was opened this week in the Queen's Hall, Langham-place. Those who are responsible for this departure—and the committee includes the names of some of the leading druggists and surgical instrument makers—must be congratulated on the success which, judging from the excellent number of visitors present during the week, has attended their first venture. The Queen's Hall does not afford very much space for the arrangement of exhibition stalls, but although the exhibition could not be regarded as a very large one, yet it contained an admirable selection of drugs, sanitary appliances, surgical instruments, &c., with the improvements of which an exhibition of this sort affords the practitioner an excellent opportunity of becoming acquainted.

In the exhibits which we may classify under the section of drugs Messrs. Oppenheimer, perhaps, displayed the greatest variety of specimens. The exhibit included a most interesting collection of medical, surgical, and pharmaceutical antiquities lent to the association by Mr. William Oppenheimer. The collection comprised surgical instruments and terra-cotta votive offerings of ancient Italy, the instruments dating from the first to the fifth century. The collection also included a series of forty-three different implements found in the tomb of an "oculist," and there was also on view a large collection of ancient drop bottles, invalid cups, and feeding bottles, many of these being of Etruscan make. These were in curious contrast to the fine pharmaceutical products for which this firm is well known, the feature of the exhibit being, of course, the palatinoid and bi-palatinoid, which are of special service in administering unstable and nauseous drugs and the animal extracts. In Messrs. Warwick Brothers' small but interesting exhibit the chief thing shown was the iron "jelloid," in which, as we have found, the iron is preserved intact in the ferrous state, so that the jelloid presents an excellent and reliable form of Blaud pill. Mr. B. Kühn's exhibits included the new non-poisonous, non-irritant, yet powerful antiseptic, disinfectant, and deodorant, chinosol; anti-diphtheritic serum (Ruete-Enoch); tannalbin, ferropyrin, papain, diuretin, and ethyl chloride in handy metal cylinders for inducing local anæsthesia. Messrs. Potter and Sacker presented a very pretty exhibition, including Schieffelin's perfect pills, which are well-known for their general pharmaceutical excellence, solubility, and yet permanency of character. The exhibit included various suppositories and a well-prepared syrup of hydriodic acid. Messrs. Arthur and Co. showed some interesting new pharmaceutical additions. Of these might be mentioned extractum radicis pernionis, a preparation for the treatment of chilblains, itching, and bruises; a neutral non-saccharine fluid containing lime and iron, which is said to obviate the disagreeable effects of ordinary iron salts; iodoglycerol; and the following iodine preparations which are said not to produce iodism—iodotannin, iodogelatin, iodovitellin, and iodoalbumin. Messrs. Hockin, Wilson and Co.'s exhibit included their well-known special pharmaceutical preparations, amongst which should be mentioned the excellent combinations of podophyllin with pepsin or belladonna with strychnine. Excellent specimens of pharmaceutical advance were illustrated in the exhibit of Messrs. Kirby and Co. in the various kinds of pills coated with "pearl," sugar, gelatin, gold, and silver. An enormous assortment of extracts, tablets, and drugs was displayed on the stall of Messrs. Parke, Davis, and Co., while the feature of Messrs. Cooper and Co.'s exhibit was the pretty cachets, which consist of flexible, tasteless, and easily soluble wafer capsules for the administration of drugs. Mr. Martindale's stall gave evidence of his determination to keep pace with modern requirements. Of the novelties in Messrs. J. F. MacFarlan and Co.'s exhibits should be mentioned the silk sutures and catgut ligatures, the latter being put up in the form of balls, as suggested by Dr. Charles Cathcart. The exhibit, of course, included this firm's well-known purified chloroform. Close by was a display of certain members of the aromatic series, by the Fleming's Oil and Chemical Company, and chiefly those employed as antiseptics and insecticides. It included ammoniated camphylene cream, moth preventives, and various carbolic preparations.

The bulk of the displaying space was undoubtedly devoted

to surgical appliances and instruments, and this section attracted considerable interest. No less than twenty-one firms contributed to this collection. They included Messrs. Maw, Son, and Thompson, of 7 to 12, Aldersgate-street, E.C. (aseptic instruments, clinical thermometers, syringes, india-rubber goods, &c.); Messrs. Claudius Ash, and Sons, Limited, of 5 to 9, Broad-street, Golden-square, W. (dental requisites, nitrous oxide gas appliances, &c.); Messrs. Mayer and Meltzer, of 71, Great Portland-street (gynæcological instruments and aseptic appliances); Messrs. John Weiss and Son, of 287, Oxford-street, W. (aseptic instruments, operating tables, &c.); Messrs. K. R. Schramm and Co., of 24, Great Castle-street, W. (orthopædic appliances); Messrs. John Bale, Son, and Danielsson, of Great Titchfield-street, Oxford-street, W. (anatomical diagrams, clinical figures, &c.); Messrs. Evans and Wormull, of 31, Stamford-street, S.E. (army medical equipments); Mr. W. K. Stacy, of 4, Newgate-street, E.C. (various hospital accessories); Mr. K. Schall, of 55, Wigmore-street, W. (electrical apparatus, including that for the x-ray work); Messrs. J. G. Ingram and Son, of Hackney Wick (rubber goods, enemas, syringes, &c.); the Lattice Elastic Stocking and Mavette Co., of 70, Fenchurch-street, E.C. (varicose vein appliances, chest protectors, and binders); Miss Webb, of Bournemouth (hospital and massage gown obviating movement on the part of the patient and useful in surgical cases); Messrs. Coxeter and Son, of Grafton-street, Gower-street, W.C. (gynæcological instruments, anæsthetics, inhalation and electrical apparatus); Mr. Frank A. Rogers, of 327, Oxford-street, W. (sprays, anatomisers, and injecting apparatus); Messrs. T. Burberry and Sons, of 30, Haymarket ("urber," a mackintosh substitute); Messrs. Down Brothers, of 21, St. Thomas's-street, S.E. (every conceivable form of surgical instrument); Messrs. C. J. Plucknett and Co., of 25, Poland-street, Oxford-street, W. (dental appliances); Messrs. W. H. Bailey and Son, of 38, Oxford-street, W. (surgical instruments, enemas, douches, bed-pans, ear-trumpets, &c.); Messrs. Nehmer Brothers, of 27, Sekforde-street, Clerkenwell, E.C. (new electrical apparatus to take the place of batteries for medical purposes); Messrs. T. J. Syer and Co., of 45, Wilson-street, Finsbury-square (operating table and couch, and invalid accessories); and Mr. F. Davidson, of 120, Great Portland-street (simple sight-testing apparatus for the general practitioner).

Sanitary appliances were well and widely represented. One of the most interesting exhibits coming under this classification was that of Messrs. J. Defries and Sons, Limited, of 147, Houndsditch, E.C., who illustrated the application of the Pasteur filter both on the small and large scale. The exhibit, in addition, comprised the Equifex saturated steam disinfector, steam sterilisers, and some cultures of pathogenic organisms. Some good things were shown by the Liverpool Lint Co., of Netherfield-road (North), Liverpool, amongst them being flax and cotton lints, bandages, carbolised tow, and "first-aid" dressings. Messrs. S. F. Goss, Limited, of 201, Regent-street, showed a high-class collection of toilet appliances and preparations adapted to modern medical requirements, and which they describe as "free from quackery." Close by was the stall of the Sanitary Wood Wool Co., of 26, Thavies-inn, Holborn-circus, E.C., where Hartman's patent wood wool preparations could be inspected. These, as is now well known, are applied for all conditions wherever antiseptic treatment is needed. Messrs. Tidman, Son, Limited, brought to the notice of the visitors their sea salt, sea soap, salicylic soap, and creamoline soap. The Lawes Chemical Co., of 59, Mark-lane, E.C., displayed to advantage their comparatively non-poisonous disinfectant fluid, which neither stains nor burns. Other disinfectants were shown, as, for instance, formalin, by the Formalin Hygienic Co., of 9 and 10, St. Mary's-hill, E.C., which may now be applied in various forms for all purposes of disinfection and sterilisation. The more well-known and time-honoured disinfectant, chlorine, was shown in improved form as bleaching powder by the United Alkali Co., of Exchange-buildings, Liverpool. Their preparations are a great advance on the old bleaching powder. The interesting absorbent material now prepared from peat by the Peat Industries Syndicate, of 15, Walbrook, E.C., was shown in various hygienic forms, as, for example, accouchement sheets, dressings, sanitary towels, &c. The great advantage of this eminently absorptive material is that in itself it is distinctly clean as well as antiseptic. The Whitely Exerciser Co., Limited, of 20 and 21, Laurence Pountney-lane, Cannon-street, E.C., exhibited an ingenious little contrivance providing an infinite variety of exercises and adapted for exercising in a small space; it may even be used by bed-fast patients. Messrs. D. Blair and Co., of 47, Cannon-street, E.C., showed their "Instra" Warmers, which are very handy and convenient for all purposes of local warming; they have already been accorded a favourable account in our columns. "Autosprays" are the patented invention of the Medico-Hygienic Inventions Company, Limited, of 63, Queen Victoria-street, E.C., which are well worthy of mention. These consist of solutions of a variety of remedies, agents for immediate application, in the form of a fine spray. In this exhibit also Trillat's system of aerial disinfection was illustrated, and preparations suitable for use in the system were shown. The comparatively rapidly-acting yet sterilising filter of the Berkefeld Filter Company, of 121, Oxford-street, W., was shown in action, and afforded an attractive exhibit. Messrs. Newton, Chambers, and Co. displayed several Izal preparations, the active constituent, though a powerful antiseptic, being otherwise quite innocuous. Lastly, Messrs. Ewart and Sons, of 346, Euston-road, N.W., gave an excellent demonstration of the advantages of their "Geyser," which, as was shown, could be applied for all domestic purposes.

(To be concluded.)

THE HOSPITAL REFORM ASSOCIATION.

THIS youthful though energetic association held its first annual dinner at the Holborn Restaurant on July 26th, Dr. WARD COUSINS being in the chair. Some sixty members and others interested in hospital reform were present.

In proposing the toast of the Hospital Reform Association Mr. LOCH referred to the fact that the staffs of hospitals were not sufficiently in touch with the outside practitioners. If all the organisations and societies in a given district knew what they were severally doing, and could communicate the one with the other, it would go far to eliminate some of the worst instances of hospital abuse. In a great many instances he thought that out-patients should, after having been seen once, be referred back to their usual medical man.

The Chairman and other members, in responding to this toast, all laid stress upon the lack of supervision of out-patients as to whether or not they were fit subjects for relief. Although in many instances the general practitioner abused the hospital by sending patients to a hospital to save himself trouble, yet a great part of the blame lay with the staffs of hospitals who saw any patient who might come without inquiry.

Dr. GLOVER thought the abuse of hospitals one of the most serious questions now before the public and perhaps the most serious one before the profession. In various relations he had had to study it. As a member of the Council of the Metropolitan Hospital Sunday Fund he had directed attention to it and would continue to do so, for it was still undisposed of in that body. He was at the meeting that night as the representative of THE LANCET, whose deep interest in the question was shown by a series of investigations which had more than anything else set the truth on this subject before the profession and the public. The medical profession had a deep interest in the right administration of medical charity, for the profession itself, apart from hospitals, did half the medical charity of the country. Finally, he impressed on the association that their success must depend on securing the support of the united profession. They, as general practitioners, could not act efficiently without the help of the medical staffs, for without their aid hospitals could not be conducted, and their interests could not be separated from those of the profession at large.

Mr. TIMOTHY HOLMES mentioned that he was, perhaps, the only surviving member of a committee which sat in 1871 to consider the question of hospital abuse. There were a number of eminent persons upon it, and they did—nothing. He thought that every hospital should be restricted to its own district and be a great centre of charity for that district; it should be in touch with the general practitioners in the neighbourhood, and they should be able to look

upon it as a centre whence advice and help could be obtained. Such a scheme, he thought, would be of benefit to both patient and medical man. With regard to the abuse of the letter system, that had been given up at St. George's Hospital for the last thirty years.

The proceedings ended with the usual complimentary toasts. A notable feature of nearly all the speeches was the number of complimentary references to the work done by THE LANCET in its inquiry into club practice and the like. It was cheering too to see how men from the provinces as well as metropolitan medical men were all agreed as to the necessity of in some manner curbing hospital abuses. We can only wonder how it is that this evil has been allowed to attain to such proportions not only under the eye of the profession, but with its very connivance and assistance; but the fact is obvious. Men holding hospital appointments and more or less represented on the managing boards of hospitals have looked passively on while the canker of abuse has grown until it almost defies control, and it has become a difficulty now to convince hospital authorities that there is any evil to be remedied. Familiarity breeds contempt, and they have become so accustomed to crowds of patients as to regard them as a credit and ornament to their respective hospitals. Such crowding leads to the very evils which are rightly complained of as being present in club and medical aid societies' practice. Careful observation, discrimination of cases, and the personal factor are all wanting and impossible in the presence of such numbers of patients, so that cases that need help, and further help than mere medical attendance, cannot be particularly attended to. This is the very discredit of a charitable institution, to invite a promiscuous crowd, pauperising the well-to-do, and not extricating from pauperism the really poor. The present year is likely either to fasten this curse of hospital pauperism on the public and the profession with a tight grip or to see a change in the administration of hospitals. The whole profession is interested in seeing this change effected without delay, and can either compel the reform, leaving intact all that is good in the hospital system, or it can, by apathy and divided counsels, give the evil a fresh lease of existence.

THE INTERNATIONAL CONGRESS OF NEUROLOGY, PSYCHIATRY, MEDICAL ELECTRICITY AND HYPNOLOGY.

THE first session of this Congress will be held at Brussels from Sept. 14th to 19th, 1897, under the presidentship of Professor Verriest of Louvain. The general secretary is Dr. Crocq, of the Molenbeek Hospital, whose address is 27, Avenue Palmerston, Brussels. All authors of personal contributions are requested to send a summary of their contributions to the general secretary as soon as possible. We subjoin the official programme so far as it has been at present decided.

QUESTIONS SUBMITTED FOR DISCUSSION.

NEUROLOGY.

I. The Surgical Treatment of Epilepsy: its Indications and Consequences. Reporter: Professor Winkler, of Amsterdam (Holland).

II. Pathogeny and Treatment of Exophthalmic Goitre. Reporter: Professor Eulenburg, of Berlin (Germany).

III. Pathogeny and Semeiology of Reflexes. Reporter: Professor Mendelssohn, of St. Petersburg (Russia).

IV. (Subject not yet decided.) Reporter: Professor Oppenheim, of Berlin (Germany).

V. Influence of the Delivery on the Nervous and Mental Diseases presented later by Children. Reporter: Professor Anton, of Graz (Austria-Hungary).

VI. Pathogeny of Muscular Rigidity and of Contracture in the Organic Affections of the Nervous System. Reporter: Professor Van Genuchten, of Louvain (Belgium).

PSYCHIATRY.

I. On the Diagnostic Value of the Prodromic Symptoms which long Precede the Manifestations of General Paralysis. Reporter: Professor Thomson, of Bonn (Germany).

II. Psychoses and Dreams. Reporter: Dr. Sante de Sanctis, of Rome (Italy).

III. On the Modifications of the Morbid Type of Progressive Paralysis of the Insane during the last Thirty Years. Reporter: Professor Mendel, of Berlin (Germany).

IV. On the Relations between Psychoses, Mental Degeneration, and Neurasthenia. Reporter: Dr. Lentz, of Tournai (Belgium).

MEDICAL ELECTRICITY.

I. The Semeiological Value of Electrical Reactions of Muscles and Nerves. Reporter: Professor Doumer, of Lille (France)

II. The Therapeutical Value of High Frequency Currents. Reporter: Professor Bergonié, of Bordeaux (France).

HYPNOLOGY.

I. The Therapeutical Value of Hypnotism and Suggestion. Reporter: Dr. Milne Bramwell, of London (England).

II. The Question of Criminal Suggestions: their Origin and Actual State. Reporter: Professor Liegeois, of Nancy (France).

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6543 births and 4060 deaths were registered during the week ending July 24th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 14·7 to 16·6 per 1000, further rose last week to 19·3. In London the rate was 20·0 per 1000, while it averaged 18·8 in the thirty-two provincial towns. The lowest death-rates in these towns were 10·1 in Derby, 10·3 in Croydon, 10·9 in Swansea and in Halifax, and 12·8 in Huddersfield; the highest rates were 22·5 in Birmingham, 24·9 in Salford, 25·3 in Sheffield, and 26·4 in Liverpool. The 4060 deaths in these towns included 904 which were referred to the principal zymotic diseases, against 504 and 572 in the two preceding weeks; of these, 526 resulted from diarrhœa, 153 from measles, 92 from whooping-cough, 60 from diphtheria, 48 from scarlet fever, 25 from "fever" (principally enteric), and not one from small-pox. No fatal case of any of these diseases was recorded last week in Halifax; in the other towns they caused the lowest death-rates in Brighton, Swansea, and Derby; and the highest rates in Salford, Portsmouth, Sheffield, and Preston. The greatest mortality from measles occurred in Birmingham, Manchester, Burnley, Salford, and Preston; from whooping-cough in Oldham, Sheffield, and Sunderland; and from diarrhœa in Leicester, London, West Ham, Portsmouth, Liverpool, Birkenhead, and Sheffield. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 60 deaths from diphtheria included 42 in London, and 4 in Liverpool. No fatal case of small-pox was registered last week in any of the thirty-three large towns, and no cases of small-pox were under treatment during the week in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2976, against numbers increasing from 2380 to 2903 on the twelve preceding Saturdays; 396 new cases were admitted during the week, against 310, 349, and 381 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 116 and 138 in the two preceding weeks, further rose last week to 158, but were 22 below the corrected average. The causes of 58, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Oldham, Leeds, Hull, Newcastle-upon-Tyne, and in nine other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Norwich, Liverpool, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·7 and 17·9 per 1000 in the two preceding weeks, further rose to 19·5 during the week ending July 24th, and slightly exceeded the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·8 in Aberdeen and 15·2 in Greenock to 23·9 in Perth and 25·6 in Leith. The 580 deaths in these towns included 37 which were referred to whooping-cough, 35 to diarrhœa, 15 to measles, 7 to "fever," 5 to scarlet fever, and 1 to diphtheria. In all, 100 deaths resulted from these principal zymotic diseases, against 82 and 80 in the two preceding weeks. These 100 deaths were equal to an annual rate of 3·4 per 1000, which was 0·9 below the mean rate last week from the same diseases in the thirty-three large English towns. The 35 fatal cases of diarrhœa showed a further increase upon the numbers recorded in recent weeks, and included 20 in Glasgow and 7 in Dundee. The deaths referred to whooping-cough, which had increased from 16 to 23 in the three preceding weeks, further rose to 37 last week, of

which 19 occurred in Glasgow, 7 in Edinburgh, and 6 in Dundee. The 15 fatal cases of measles exceeded by 3 the number in the preceding week, and included 8 in Leith, 4 in Glasgow, and 3 in Edinburgh. The deaths referred to different forms of "fever," which had been been 10 and 3 in the two preceding weeks, rose again to 7 last week, of which 2 occurred in Glasgow, where 3 of the 5 fatal cases of scarlet fever were also recorded. The deaths from diseases of the respiratory organs in these towns, which had been 69 and 68 in the two preceding weeks, rose again to 87 last week, and exceeded by 21 the number in the corresponding week of last year. The causes of 38, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 20·3 to 24·2 per 1000, declined again to 23·3 during the week ending July 24th. During the past three weeks of the current quarter the death-rate in the city has averaged 23·0 per 1000, the rate during the same period being 17·1 in London and 20·2 in Edinburgh. The 156 deaths registered in Dublin during the week under notice showed a decline of 6 from the number in the preceding week, and included 20 which were referred to the principal zymotic diseases, against 9 and 11 in the two preceding weeks; of these, 7 resulted from diarrhœa, 4 from whooping-cough, 3 from measles, 3 from diphtheria, 2 from scarlet fever, and 1 from "fever." These 20 deaths were equal to an annual rate of 3·0 per 1000, the zymotic death-rate during the same period being 4·6 in London and 2·8 in Edinburgh. The 7 fatal cases of diarrhœa considerably exceeded the numbers recorded in recent weeks. The deaths referred to whooping-cough, which had been 2 and 3 in the two preceding weeks, further rose to 4 last week. The mortality from "fever" showed a decline, while the deaths from measles, scarlet fever, and diphtheria exceeded those recorded in the preceding week. The 156 deaths registered in Dublin last week included 33 of infants under one year of age, and 35 of persons aged upwards of sixty years; the deaths of infants showed an increase, while those of elderly persons were slightly below those recorded in the preceding week. Six inquest cases and 2 deaths from violence were registered; and 54, or more than a third, of the deaths occurred in public institutions. The causes of 7, or more than 4 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR E. D. FARMAR-BRINGHURST has been given the Medical Charge of the Northumberland Artillery Militia during the stay of the corps at Plymouth. Surgeon-Captain H. I. Pocock proceeds to Horfield for duty, and Surgeon-Lieutenant Marriott assumes Medical Charge of troops, South Fort Barracks, Dover. Brigade-Surgeon-Lieutenant-Colonel J. M. Beamish, M.D, joins at Woolwich for duty, and Surgeon-Major W. T. Johnston proceeds to Okehampton for Medical Charge of the camp. Surgeon-Major Patrick J. O'Sullivan, M.D., retires from the service receiving a gratuity. Surgeon-Major Patrick Halion Fox, F.R.C.S.I., retires from the service receiving a gratuity.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the under-mentioned officers are replaced at the disposal of the Government of India, Home Department: — Surgeon-Captain C. D'Alton, A.M.S., Surgeon-Captain J. F. Kelly, A.M.S., Surgeon-Major Routh, A.M.S., and Surgeon-Captain Mangan, A.M.S. The services of Surgeon-Lieutenant J. C. Robertson, on plague duty in the Jhansi districts, are replaced at the disposal of the Government of India, Home Department.

NAVAL MEDICAL SERVICE.

Surgeons: Richard W. Stanistreet to Chatham Hospital; James Bradley, M.D., to the *Egeria;* and Daniel J. P. McNabb to Haslar Hospital.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major George W. Hatchell, having resigned his Militia appointment, ceases to belong to the Army Medical Reserve of Officers. Surgeon-Captain C. C. Moxon, having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers.

VOLUNTEER CORPS.

Artillery: 6th Lancashire: Surgeon-Lieutenant W. H. Murdoch, M.D., resigns his commission. 1st Argyll and Bute: Surgeon-Captain J. Cunningham, M.B., resigns his commission. *Rifle:* 1st Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Surgeon-Lieutenant-Colonel T. M. Dolan, M.D., resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the Battalion on his retirement. 3rd Glamorgan: Surgeon-Lieutenant J. E. J Soden resigns his commission. 1st Tower Hamlets: Surgeon-Lieutenant J. F. Woods, M.D., resigns his commission.

THE ALLEGED COMING CHANGES AT THE HORSE GUARDS.

There has of late been a good deal of discussion in the public journals regarding the rumoured changes at the War Office, but owing to some quasi-official assurances matters appear to have settled down for the present. The discussion was raised, we suspect, more with the view of registering a protest against the accomplishment of certain alleged appointments than with any belief that these had actually been definitely agreed upon. The *Saturday Review* of the 10th inst. had a paragraph, *à propos* of the rumours that Lord Wolseley's health was not good, and might lead to his resigning the supreme command of the army, in which it admitted a feeling of disappointment of the hopes entertained on his being appointed to that office. As regards the appointment hereafter of a Royal Duke to the position our contemporary remarked that it would probably lead to its being made permanent, which, as experience had shown, is to stereotype inefficiency. In case of the rumoured retirement of Lord Wolseley turning out to be correct—it is but a rumour and most probably an unfounded one—Lord Roberts's great claims would, of course, have to be considered. Amid the various statements, however, that have been put forward of late only one thing seems certain—namely, that the post of Adjutant-General of the army will have to be filled up in October on the retirement of Sir Redvers Buller, but nothing is definitely known at present as to who his successor will be. The general feeling in the army appears to be that Sir Evelyn Wood, the present quartermaster-general, has the greatest claims to be Sir Redvers Buller's successor. He has had, as everybody knows, a long, distinguished, and very varied service as a soldier, and is besides a very practical, straightforward, and able man. In the event of his appointment the question arises as to who is to be the new quartermaster-general? Apart from difficulties arising out of his Royal rank and political considerations, it is only just to say that the Duke of Connaught is very popular, has a keen love of his profession, is a good man of business, and is most conscientious and painstaking in the discharge of his duties. His Royal Highness has impressed people, too, as being eminently fair and conciliatory to all. The nation as a whole and all branches of the service are necessarily interested in these appointments, for the efficiency as well as the contentment and happiness of the army, and of the medical service as an important branch of it, greatly depends upon the wisdom of the choice. The retiring Adjutant-General, Sir Redvers Buller, is universally regarded as an able and honest man, and a most distinguished soldier, of whom more will be heard in the event of any war occurring.

ARMY SERVICE IN INDIA.

Captain Pirie asked the Under-Secretary for War in the House of Commons on the 23rd inst. whether the War Office would be prepared to reconsider the question of long service in India for British troops as being both physically and financially advantageous, especially in view of the disastrous casualties from enteric fever and other disease among British soldiers in India.—Mr. Brodrick said, in reply, that the application of the short-service system to India has been proved to possess many advantages from a physical, financial, and military point of view, and Her Majesty's Government had no intention of resorting to the system of long service in the Indian army. We have frequently adverted to this subject in the past. It appears that the amount of sickness, and notably of enteric fever, is much greater among young soldiers during their first two years of service in India than among older and

longer resident soldiers, but the death- and invaliding-rates are greater among the latter. A soldier of about twenty-five years of age, and from that to thirty, with over two years' service in India, is probably at his best for military purposes and efficiency. On medical and physical, and consequently on financial, grounds it seems to us that no pains should be spared to retain soldiers for Indian service for a few years—at any rate, for a year or two—longer in India than at present; but we suppose it is argued that this would interfere with the working integrity of the present short-service system.

THE LATE GRECO-TURKISH WAR.

We can commend the perusal of Mr. Bennet Burleigh's article on "The Greek War, as I Saw It," published in the *Fortnightly Review* for this month to those who are interested in the subject. The article is the reverse of flattering to the Greeks. It certainly gives an object-lesson on the text "How war should not be made." Mr. Bennet Burleigh says that while at Salonica he ascertained, through an English friend who had made it his business to know, and from personal observation, that 12,000 sick and wounded Turkish soldiers had been brought into that place from Thessaly. These did not include all the worst cases or those who were wounded in the later engagements, such as those of the last days around Velestino and Domoko.

THE CHITRAL AFFAIR.

We are always having some little mountain warfare on hand in India. The intelligence that has been received at the India Office regarding the night attack on the British force by the hill tribes in the Malakand Pass, resulting in the death of one and the wounding of four officers, is embarrassing news for the Indian Government, because it involves the trouble and cost of a punitive force. Moreover, it is very difficult to guard against such attacks in the future or to deal effectively with those taking part in them. One thing is clear, that the strength of the Indian Medical Service must be maintained in order to supply medical officers to meet contingencies of this kind.

THE ARMY MEDICAL STAFF.

It appears that the War Office will not obtain a sufficient number of candidates to fill the vacancies existing in the British Medical Service at the forthcoming examination. It is calculated that at least forty or fifty vacancies have to be filled and, according to the latest official statement in the House of Commons, there were a little time ago only twenty-seven candidates for these appointments.

ARMY MEDICAL SCHOOL, NETLEY.

The summer session of the Army Medical School, Netley, will be brought to a close on July 30th, when the names of those gentlemen recommended for commissions in the Army Medical Staff and Indian Medical Service will be announced and the prizes will be distributed by Major-General Sir William Butler, K.C.B., commanding the South-Eastern District.

THE HEALTH OF BOMBAY.—The news from Bombay is not altogether satisfactory. There has ceased to be any mortality from plague, but there is some cholera in the city, and the death-rate is still high.

THE INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH.—A meeting, under the auspices of the Incorporated Society of Medical Officers of Health, was held in Bristol on July 24th. The members were received at the Guildhall by the High Sheriff of Bristol and the chairman of the Bristol Sanitary Committee. A business meeting was held, and, after partaking of luncheon at the invitation of the latter gentleman, the members proceeded to Ham green for the purpose of inspecting the fever hospital in course of erection there.

PRESENTATIONS TO MEDICAL MEN.—Mr. G. H. Ede, M.D., C.M.Aberd., of Bramley, Surrey, has been the recipient from the Bramley classes, in connexion with the St. John Ambulance Society, of a walking stick with silver mountings from the men's class, and a paper knife with silver handle from the women's class, as thank-offerings for his ambulance lectures.—Mr. Thos. F. Fannahill, M.B. Glas., D.P.H. Camb., of Glasgow, has been presented by twenty-two members of the Caledonian Medical Society with a Morton's Ophthalmoscope and accessories, appropriately inscribed. Until recently he was the editor of the *Caledonian Medical Journal*, and is now proceeding to South Africa.

Correspondence.

"Audi alteram partem."

THE RINDERPEST.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of March 6th you were kind enough, in reviewing Dr. Koch's report of Jan. 31st, to refer to the correspondence I had with the Government. I now send you a memorandum embodying the suggestions that have been made from time to time by me and the results arrived at by the various experts arranged in chronological sequence, and as I thought the views expressed were original, although further reading shows that not to be the case, it is hoped that you will be able to find space for the document, and if you think it worthy of editorial comment you may be able to get me a hearing and enable me to endeavour to avert a calamity. Although not entirely original, you will see doubtless the application of my ideas to many human diseases; its application to the bubonic plague was suggested to the Indian Government on Feb. 8th and 10th. When my views were submitted to the Government expert they were condemned, and in consequence it was not possible for me to get a hearing before the Select Committee. Meanwhile the disease is spreading rapidly into the colony, and I much fear will become endemic if Dr. Hutcheon's view be carried out.

Within the last few days a method has been thought out whereby the toxic strength of the blood might be increased, but until Dr. Edington's annual report appears I shall not know whether I am trespassing on his preserves, so at present do not like to mention it.

I am, Sirs, yours faithfully,

Sea Point, June 8th, 1897. H. A. LAWRANCE, F.I.C., F.C.S.

MEMORANDUM.

1. Oct. 22nd, 1896.—Letter to Mr. Farre. Suggests the use of blood of "salted" cattle as a preventive method.

2. Oct. 25th, 1896.—Letter to Secretary, Rinderpest Committee, Bloemfontein, O.F.S. Points out that suggestion in Par. 1 anticipates the work of bacteriologist, as after discovery and isolation of organism he would have to prepare the antitoxin. "The antitoxin is, I believe, undoubtedly present in the blood of beasts that have survived the disease."

3. Nov. 7th, 1896.—Letter to Dr. Edington. Suggests the use of blood of "salted" cattle as a preventive method.

4. Nov. 10th, 1896.—Letter to Mr. Farre. "Blood might be drawn off from the animal (salted) and filtered through a porcelain candle in order to obtain the serum. If it be that there has been a change in the blood with the production of a toxin or antitoxin, then this serum should have a protective action."

5. Nov. 29th, 1896.—Letter to H.E. the Governor: "Bearing this in mind, it occurred to me that one or other of two things must have taken place in the blood of these immunised cattle—either there must have been formed a toxin, with the subsequent production during recovery of an antitoxin, in the blood serum, in which case the serum, filtered through porcelain, should have a therapeutic and preventive property if used as a vaccine for the pest; or the white corpuscles (phagocytes) have acquired the power of destroying the microbes of the disease, in which case the inoculation of unfiltered blood would probably prove to be an efficacious treatment. Your Excellency will observe that in this process it is not proposed to introduce into the beast to be protected any disease organism, as it is essential that the animal should have quite recovered from a sharp attack of the pest, so that whatever change, be it the production of an antitoxin or the stimulating of the white corpuscles, the microbe can produce in the blood of animals has been carried to its fullest extent."

6. Jan. 3rd, 1897.—Dr. Koch's Reports, p. 7: "And also the circumstance that in the bile of most of the cases examined I have found in pure cultivation a bacterium, which, according to the description published, is conformable with the microbe discovered by Dr. Simpson in Calcutta and declared to be the cause of rinderpest. All these experiments with bile, however, had negative results. We are consequently justified in saying that bile does not contain the contagion of rinderpest, and that Simpson's bacterium cannot be considered to be the microbe of rinderpest."

7. Jan. 31st, 1897.—Dr. Koch's Reports, p. 13: Experiments with serum of "salted" cattle described. "These experiments demonstrate that the serum of immune animals possesses a certain protective power."

8. Feb. 10th, 1897.—Dr. Koch's Reports, p. 15. Shows that the effect of the serum is only temporary. "A second and equally important fact is that one is able to render immune healthy cattle with the bile of such that have succumbed to rinderpest."

9. Feb. 13th, 1897.—Letter to *Cape Times* (not inserted): "What has occurred to the microbes that have been alleged to be the cause of rinderpest? Dr. Simpson's microbe was disposed of in a very summary fashion, but it will not surprise me if a good deal more is heard of this organism in the future."

10 Feb. 17th, 1897.—Letter to *Cape Times* from Mr. G. E. Cory, Grahamstown, Feb. 13th, enclosing letter from Dr. Simpson, Calcutta, Jan. 8th: "I have, however, two animals which have been rendered immune against the rinderpest microbe." (Compare with paragraphs 6 and 9.)

11. March 1st, 1897.—Letter to Secretary for Agriculture: "I am

anxiously waiting for Dr. Koch's further announcements, as there is a point he may possibly overlook, and if so there may be trouble in store."

Contradictory reports of the bile cure now began to appear in the press.

12. March 26th, 1897.—Letter to Secretary for Agriculture: "Let me ask you to compare the last paragraph of my letter of the 1st inst. with Dr. Hutcheon's letter which appeared about the 16th inst. and with the reports that keep coming to hand of the results of the bile method, and I think you will agree that I was well able to see the danger ahead, and it may be mentioned that there is even graver danger in a rash use of the serum method on the lines laid down in Dr. Koch's last report." This method will be found on p. 19, Dr. Koch's Reports.

13. April 22nd, 1897.—Letter to Mr. Theron, Chairman, Rinderpest Committee: "I should consider, however, that it is very probable indeed that in the virulent blood, at a certain stage of the disease which would have to be ascertained by experiment, there is a maximum amount of the poisonous toxin. Then, if the blood were taken at this stage and filtered through porcelain, keeping in an ice chest being insufficient, in order to remove all organisms, and this filtrate were mixed with the serum taken from salted cattle, I think a powerful vaccine would be obtained that might perhaps give an immunity of a more lasting character." "Probably it would be found, if the method indicated above were tried, that before a perfect immunity could be secured several inoculations would have to take place, but you will notice that *no* disease organism would be introduced into the beast to be protected, and this is, in my opinion, a condition of the greatest importance."

13*a*.—"As regards the bile process it will be found that in one of Dr. Koch's early reports he stated that he found a bacillus present in the bile in pure cultivation which he took to be Simpson's microbe, but as an injection of this gall did not impart the disease the conclusion was drawn that this microbe was not the cause of the disease. In another report he shows that the antitoxic property of a gall was so great that a mixture of equal parts bile and rinderpest blood did not communicate the disease. This experiment shows that, under certain conditions, bile is able to counteract the disease organisms, and if this be the case is it not possible that Dr. Koch has drawn too hasty an inference from the fact that his microbe-containing gall did not communicate the disease! If this surmise of mine be correct it would explain the very contradictory reports about this process; the extract in the *Argus* of the 20th inst. from the *Bechuanaland News* and the telegram from Dr. Hutcheon read yesterday lend strong support to my views, for if the gall were rich in microbes and weak in antitoxic material the disease would appear in the treated cattle; while if the reverse were the case immunisation without any sickness would result, and according to the relative proportion of these two ingredients the disease would either not appear at all or in a longer or shorter time." "Here, again, filtration through porcelain would probably eliminate this source of trouble, and the bile method might then be used with the certainty of not communicating the disease."

14. May 7th, 1897.—Select Committee's Report, Mr. Hutcheon's evidence:—987. "It is only now dawning upon us that we will be able to correct the failing in inoculation—namely, its tendency to communicate itself to a number of herds when one is inoculated. Another point that has become clear to us is that by the present inoculation you get a certain number of cattle in the herd infected; complete immunity is not given to others, but the disease slumbers on and we find afterwards that the immunity is not permanent. Hence we get the disease much prolonged beyond what it would have been if we had allowed it to go on in the herd." (Compare 13*a*.) 1003. "There is another point that we have not decided yet. There is bile and bile. We are only finding out now that there are a great many things with reference to bile that we did not know before. I am satisfied of this, that though the physical appearance of different samples of bile may be the same, there is a difference, because you may inoculate with the same bile in appearance and no bad results seem to follow. You do not communicate the disease, and so far as we have seen the herd remains healthy. In another case of two biles the same in physical appearance you have very unsatisfactory results, although every care is taken. The same parties would inoculate. I selected a great portion of the bile myself and others inoculated, so that there should be no contact between me and the cattle, and yet the results were different. Now Dr. Turner and Dr. Edington have made a statement that they can test this bile and determine what is satisfactory and what is not, and it is quite possible that they will. If they effect that, and it can be practically carried out, and according to their statement they can, for they will use the spectrum to see whether the bile be good or bad. Now these are points that have to be proved." (Compare 9, 13*a*.) 1011. "Dr. Koch recommended bile as the most reliable thing. Dr. Kohlstock and Dr. Turner are convinced that bile is the thing, notwithstanding the unsatisfactory results. And it is a curious thing that the herds they have inoculated have been satisfactory in results. No disease appeared in them after inoculation. We have some in the Herschel district, but the disease appeared after thirty days from infection from outside." (Compare 13*a*.) The main point in Mr. Hutcheon's evidence is the suggestion to inoculate first with bile and then ten or twelve days later with virulent blood.

15. May 10th, 1897.—Select Committee's Report, Dr. G. Turner's evidence:—1144. "My opinion is that inoculation with proper gall confers immunity on the cattle." 1145. "I cannot say permanent because the cattle longest inoculated only date back about three or four months. We have sent down to that farm to have the cattle inoculated with rinderpest blood to ascertain whether they are immune. Five of these cattle were inoculated on Friday last with virulent blood." 1146. "You can tell [the proper kind of gall] to a certain extent by the colour. The green gall is the best gall, but even amongst green gall there are choices. A gall which apparently resembles good gall may not confer immunity. I hope in a short time to be able to tell which is good and which bad gall." 1147. You have made experiments with the spectrum with reference to this, and you noticed certain lines in the galls which rendered cattle immune? "Yes." 1148. What are they? "I am sorry you ask me this, as I have not finished yet. I come forward thus with the greatest diffidence. In those galls that have acted well I have noticed the bands of the blood spectrum, not blood as we popularly talk of it, but blood colouring matter in the gall. Those were the galls that have answered. One or two galls that I have been doubtful about have failed to give these lines, and have merely presented the spectrum of ordinary gall." 1149. Do you still continue any other empirical attempts to find a remedy? "No; we have been trying to perfect the gall prevention method." 1150. You have confined yourself to that? "We are using the serum as well. We have immunised animals with serum, but apparently the immunising is not so powerful, and for that reason we have continued mostly on the gall line." 1151. You can immunise with serum? "Yes; Dr. Koch showed that by taking serum and putting 1 per cent. of rinderpest blood with it, and letting it stand for twenty-four hours, that 20 c.c. would immunise an animal, but it does not appear to give so powerful an immunity as the gall." 1152. Have you tried experiments with antitoxin? "Yes; we have not had time to separate antitoxin from serum. We used the serum from an immune animal. We know that the serum from an immune animal injected into the blood of another will protect it in a very few hours from rinderpest, but that immunity is not very powerful and passes off very rapidly. I took some of this serum and treated two oxen with a very large portion of this serum indeed, injected subcutaneously. One ox was given 50 c.c. in the morning and 50 c.c. in the evening, and the other 80 c.c. in the morning and 80 c.c. in the evening, and I believe this was done on three days before they died. I was very much disappointed, as I was in hopes that by using the serum it might be possible to save an animal. ..... I am, however, going to try it again." 1153. Do you notice microscopically the presence of phagocytes in the blood? "They are always in the blood." 1154. Then that would be antitoxin ones? "No; I have not been examining the serum in that way. As a matter of fact, the antitoxin is not an organised thing at all. It is a chemical substance. The effect of it when it enters the system is to enable the phagocytes to resist the attacks of the micro-organisms and destroy the bacilli. There are also chemical theories to explain the action of antitoxin." 1155. Then you simply give the phagocytes in the blood additional strength? "Yes." 1160. But you may inoculate even with bile that looks all right and produce the disease? "I wish to say that I have no experience of bile giving the animals disease. I have tried in every way to give animals the disease with the bile and have failed to do so. We have used all sorts of biles, but have not succeeded up to the present." 1161. "I have taken brown bile and inoculated an animal with it, and the animal was still alive after ten days." 1167. "The animals on the farm have taken 100 c.c. (rinderpest blood), while $\frac{1}{10}$ c.c. will kill a full-grown ox." (This evidently refers to 1145.) 1176. "One of the best-known diseases is small-pox, and yet no one has isolated the organism of that disease. Although we know it is there, and cultivate it by introducing it into the cow and taking the vaccine from the cow; although we know it must be there, we cannot see it. So it is with the organism of rinderpest. I took 60 c.c. of bile in order to verify a theory of Dr. Koch's. I filtered it in a porcelain filter. I washed the filter with a salt solution that does not destroy the virus in order to wash away the liquid bile. I then examined it [what?—H. A. L.] under a microscope, but could see nothing. I then inoculated an animal with it [what? the residue or filtrate?—H. A. L.], but the animal received no ill-effect, and still the animal is immune. Something went into that animal which I could not see. I only know this from the results I arrived at, and could only see it with the eye of faith." 1179. You say that you do not know how long bile inoculation confers immunity? "No, I do not." 1180. Dr. Hutcheon stated here that he found after one month the immunity began to wear off, and the result was that the disease would remain in a herd for months. In one case fifty had been dying over a long period, and are not done yet. Dr. Hutcheon therefore recommended that all animals ten or twelve days after the bile inoculation should be inoculated with rinderpest blood. In that way he thought to drive the disease out of the country. Do you agree with that? "I think if the experiments being made prove that the gall alone is not sufficiently powerful, that is the right way to set about improving the methods." 1181. He says that unless you inoculate with rinderpest blood you may have the disease among the animals for a very long time and keep up centres of infection? "If you use a bile which does not happen to be good that which he describes might take place, but I cannot tell you that I know it of my own knowledge. The case in which this was tried was in a district which had rinderpest all round it. It is true that this bile came from Dr. Koch himself, but I am perfectly prepared to admit and am confident that all bile does not grant immunity." 1182. What is the special virtue of gall for the purposes of inoculation? "That is a question which I had a long discussion with Dr. Koch about. Dr. Koch's view is this: that the bile contains a chemical substance something like an antitoxin, and that it also contains the rinderpest organism unmitigated and in its full virulence. [Compare par. 13*a*.] He said that was so because it was well known that a ½ per cent. of carbolic acid would destroy the virus in blood in twenty-four hours in the ordinary temperature of the room. He took a good rinderpest bile and added 0·5 per cent. of carbolic acid, kept it for twenty-four hours, and inoculated an animal with it. The active agent in the bile was destroyed and the bile lost its power. Then he took ten other centimetres of the same carbolised gall and added 10 per cent. of rinderpest blood and injected it immediately, and the animal did not suffer from rinderpest but was rendered immune. [Compare with 1167, there must have been something present to modify this rinderpest blood, the dose being sufficient to communicate the disease to 500 head of cattle.—H.A.L.]. Thus he believes he put back into the bile the virulent element that he had destroyed with the carbolic acid.....I filtered 60 c.c. of bile through porcelain. Now if Dr. Koch's theory was correct the animal into which I introduced this filtered bile ought to have died; it did not, but it was immune. [Compare 1176 and par. 13*a*.] I took the filtered bile, injected it into the animal, and that animal had the rinderpest after I infected it, but it recovered. From my experiments I do not think that the organism is in the bile in the unmitigated form." 1184 "I differ on a slight point from Dr. Hutcheon there. We are perfectly agreed as to what ought to be done, but we differ as to whether gall can give rinderpest."

16.—With regard to the experiment described in 1151 it was scarcely likely to be successful for (1) the disease had nearly run its course; (2) the method of separating the serum introduced by Dr. Koch, keeping in an ice chest, would have killed the phagocytes in the immune blood. My letter of Nov. 10th said, "B. Blood might be drawn from an (immune) animal and at once injected into the veins of the beast to be protected. Should it happen that the white corpuscles (phagocytes) have acquired the power of destroying the organisms producing the disease during the progress and recovery from it, then it may be expected this treatment will be the more efficacious." In this case active phagocytes would be introduced and consequently would exert their full influence.

17. May 15th, 1897.—Dr. Edington's report: "In my former reports I showed that virus kept over seven days could not be used to infect healthy cattle. I did, however, find evidence that such inoculation gave rise to some slight degree of immunity, and it therefore seemed to me that this immunising power could only be exerted by, and obtain, in virtue of the toxin as present in the blood after the *microbes themselves had been destroyed.*" (Compare pars 5 and 13.) "I have further shown that animals which have *recovered either from this inoculation* (i.e., rinderpest blood used on or about the fifth day after its withdrawal) *or from spontaneous infection are not absolutely immune.*" "I would add with regard to the bile method that if selected bile is immediately mixed with 50 per cent. of pure neutral glycerine that it is safely kept from putrefactive change, and if kept over six days, as I have indicated in my annual report regarding blood and mucus, it is impossible then to produce virulent rinderpest on inoculation while the toxin is not destroyed." (Compare 13a.) "My earlier experiments showed that glycerine does not exert a destructive action on the contagion of rinderpest, and I have since found that it appreciably conserves its virulence, although not to any great extent." (How are the statements in the last two paragraphs to be reconciled?—H. A. L.)

18. May 17th, 1897.—Dr. Kohlstock's reports show that serum from immune animals protects for ten days. Also that under certain conditions a gall can be sterilised by heat, but does not say whether it retains its effective power. A mixture of blood and this bile rendered an animal immune. The result of the experiment mentioned in 1145 and 1167 is given. The animals were in good health, with normal temperatures, after the lapse of eight days. (Compare 17, par. 2). "Animals which were injected with brownish-green gall, containing the Simpson bacillus in pure culture, or gall of a brownish colour, containing both bacteria and streptococci, became immune without the occurrence of any accidents, such as abscesses, &c." "Thick, green gall, free from smell and organisms, has often been taken from dead cattle; on one occasion I rendered an animal immune with such a fluid."

"THE NON-POSSUMUS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—Your leading article on this subject ought to meet with the warm approval of every Fellow and Member who desires to see the College something more than a mere examining board. The situation is not new. The council is only carrying out its traditional policy of refusing to act for the promotion of the interest of those who constitute the College; in my opinion it always will so refuse to act until it becomes really and not falsely representative of the majority of its constituents. The letter of a "Fellow of the College," in THE LANCET of July 17th, hits the mark; "there can be no true representation unless the representative is responsible to those he represents." The question is one of principle. The dominant party on the council maintains that the College is a purely scientific body, and has no concern with the affairs of its Fellows and Members, except in cases of gross misconduct. In the words of a recent president the Council will not "fight the puny battles of the Members." Unfortunately for this contention, it is bound by the by-laws to "protect and defend every Fellow and Member of the College who may be disturbed in the exercise and enjoyment of the rights, privileges, exemptions, and immunities acquired by him as a Fellow or Member thereof." This by-law is the Magna Charta of the Fellows and Members, and to it the Council will be held on any and every opportunity. The Council has already stultified itself in the case of Mr. Anderson by first recommending it to the notice of the profession as one of great hardship and then refusing to do anything to "protect and defend" him. We intend to give the Council many further opportunities of such stultification, until at last it recognises that if the Fellows and Members are bound to observe the by-laws, so also is the Council.

You justly say that the situation is serious, but if the Members are in earnest about asserting their rights the solution will not be much longer delayed. If all those who have been disturbed or injured in the exercise of their profession by medical aid associations, insurance companies, or in any other way, will communicate with me, I know that the committee of the Society of Members will coöperate with them in pressing their grievances on the notice of the Council. It is only because the great bulk of the Fellows and Members have *not* been in earnest that hitherto so little progress has been made.

I am, Sirs, yours faithfully,

W. G. DICKINSON,
Hon Sec., Society of Members of the Royal College of Surgeons of England.

West Hill, Putney, S.W., July 26th, 1897.

THE LATE MR. F. W. ELLISON: AN APPEAL.

To the Editors of THE LANCET.

SIRS,—I should be very greatly obliged if you would have the kindness to insert the enclosed letter from Mr. Hatfield. The case to which he refers is one into which I have myself very carefully inquired. I am quite sure it is perfectly genuine, and it appears to me to be one in which we may, with every hope of success, appeal for help to the readers of THE LANCET. Any subscriptions that may be sent will be gratefully received by Mr. Hatfield, York House, 1, Park-road, Forest-hill, S.E., or by myself, and will be at once acknowledged.—I am, Sirs, faithfully yours,

HOWARD MARSH.

30, Bruton-street, Berkeley-square, W., July 23rd, 1897.

[ENCLOSURE.]

DEAR MR. MARSH,—I want to bring before the profession the sad case of Mr. F. W. Ellison, a former student of St. Bartholomew's Hospital, who died last September at Glenelg, Adelaide, after two days' illness, aged forty-two. He took the M.R.C.S. in 1878, and after practising for five years at Catford he went to Australia twelve years ago and managed after some time to make a living at Glenelg. He has left a widow and six children totally without means. The eldest, a boy aged sixteen, has weak lungs; the youngest is a boy aged six. Mrs. Ellison and her family are now in this country, and are entirely dependent on relatives, who are by no means well off. Up to the present time they have received small remittances from Australia, the result of the collection of book debts, but these have now almost ceased. An aunt has undertaken the charge and support of one of the daughters, and we wish, if possible, to secure for the family a small house within reach of some good school. They have, however, no furniture, and the friends are anxious to raise a fund for the purpose of buying some for them. If you can help me in this I shall be very glad. I have before me some flattering testimonials to Ellison's good qualities from yourself, the late Dr. Black, Dr. Gee, Sir Dyce Duckworth, Dr. Clement Godson, and Mr. Walsham, so I expect he will be well remembered at the hospital. He was a charming man and a great friend of mine when he lived here.

I have already been helping in some way, and I propose to subscribe to any fund that may be opened, and my friend, H. A. Francis, who wrote from Vancouver immediately he heard of the death, has informed me that he also should subscribe.—Believe me, yours sincerely,

W. H. HATFIELD.

York House, 1, Park-road, Forest-hill, S.E., July 23rd, 1897.

"A METHOD OF UNITING THE DIVIDED INTESTINE."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 22nd, which I received some days ago, I have read a note by Mr G. Lenthal Cheatle on a Method of Uniting the Divided Intestine. It might be of interest to your readers to know that I have employed in two cases the same procedure with the best results. Owing to the difficulties caused by not having instruments other than scissors, knives, and common suture needles, it came to my mind to convert the intestine into practically a flat ribbon by a longitudinal incision to make sewing easy. Thus I had first the idea of uniting the divided intestine by the method mentioned and transformed it into a definite surgical procedure. In a work which I have taken in hand, which will soon be published, I shall describe the *modus faciendi* used in my two cases.

I am, Sirs, yours faithfully,

Dr. PACHECO MENDES,
Professor of Surgery, Faculdade de Medicina.

Bahia, Brazil, July 5th, 1897.

"CYCLING FOR WOMEN: ITS EFFECT ON PARTURITION."

To the Editors of THE LANCET.

SIRS,—Your correspondent, Mr. Haydn Brown, in his lengthy criticism of my letter evidently jumps to the conclusion that I condemn cycling for women; whereas I merely drew attention to the dangers of over-exertion and the use of unsuitable saddles.

With regard to the perineum being untorn, I only stated the fact and made no pretension to skill with the short forceps, which nowadays the veriest tyro in midwifery finds no difficulty in using. I do not think it likely, as Mr. Brown supposes, that my remarks are likely to deter any of the fair sex from enjoying the pastime of cycling, which when indulged in moderately is a healthy and graceful form of exercise. I am, Sirs, yours faithfully,

July 23th, 1897. J. MCVITIE, M.R.C.S. Eng.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

XII.—BIRMINGHAM.[1]

The Hospital Reform Inquiry.—Utter Collapse of a Promising Movement.—Disorganisation and Disunion.—The Rapid Growth of Grievances.

NOWHERE, perhaps, is the question of hospital abuse fraught with so many complications as at Birmingham; but, whatever may be the difficulty of the problem, by far the greatest obstacle to reform is the lack of union among the medical men themselves. The profession has been infected by the contagion of the surrounding commercialism. Only a small proportion of the inhabitants of Birmingham were born and bred in the town. People rush in from the outside in the eager hunt for money. They simply strive to "make their pile" and haste away again. Among such a population it is difficult to spread altruistic ideas; it is a wild endeavour all round after business each for himself, and but few pause to consider what are their duties to society. This spirit also animates, more or less—let us hope very much less—the medical profession, and therefore it has been more particularly difficult to group the medical men together and get them to put their personal interest in the background so as to defend the position of the profession as a whole. In smaller towns, where the spirit of commercialism is not so paramount, organisation has been more easily accomplished. In Birmingham it suffices for one set of men to attempt to form an organisation or to start a movement, and at once another set of men are stirred with suspicions, or even moved to open hostility. Instead of inquiring what good cause is to be promoted, they will strive to find out that some personal interest is to be served. In a town where most people are seeking to enrich themselves it is difficult to believe that anyone is only seeking the general good. Perhaps this may account for the fact that in Birmingham the members of the medical profession do not hold together and have failed to understand the force and beauty of the doctrine of solidarity. Yet there was, some years ago, a movement which should have given a powerful impetus to the medical profession. In 1889 several meetings were held by the medical men practising in Birmingham to discuss the question of hospital abuse. In October of that year a preliminary report had been drawn up by a committee of medical men elected at these meetings. It was proposed to submit this report to a large public meeting of all persons interested in the medical charities of the town.

This report set forth that the demands upon the medical charities were greater than could be met, because these charities had been diverted from their original purpose. A too large proportion of the public resorted to the hospitals to the detriment of the interest of the subscribers and of the medical men, while it lowered the dignity of the recipients. Therefore, hospital reform was needed, so as to encourage providence and supplement the action of the Poor-law. Hospitals were originally intended for the poor, and were supported by those who expected no benefits in return. The report then went on to say that "under the 'ticket system' it is notorious that tickets are often given to unfit persons; are purchased either directly or indirectly by those who propose to use them, and are thus diverted from their proper purpose. Under the so-called 'free system,' though inquiry is usually made as to the position of the applicant, the same abuse exists. Many persons who are well able to pay for the services of a competent medical attendant, and not a few who could afford the fee of a consultant or specialist, elude the inquiry and obtain gratuitous treatment. Among the in-patients are often to be found well-to-do persons who, requiring a surgical operation or having met with an accident, prefer to be treated in a well-ordered hospital rather than in their own homes, and disregard the fact that they have no right to accept either the benefits of a charitable institution or the services of a medical man without paying for them in full. In this matter the medical profession is not altogether free from blame. Hospital officers acquiesce in the admission of unsuitable cases; other medical men are not always sufficiently careful as to the status of those whom they recommend for hospital treatment."

The report goes on to say that the number of out-patients is often so great that the serious cases suffer considerably from having to wait a long time, and that sufficient attention cannot be given to each case. As regards the in-patients, persons requiring surgical operations are occasionally kept waiting weeks because there is no bed vacant, while the stay of those who are admitted is sometimes undesirably shortened so as to make room for those who are impatiently waiting their turn. "Furthermore, the over-pressure on the time and energy of the medical officers is apt to interfere with the due discharge of their duty as teachers. It has therefore been necessary to appeal for more funds so as to enlarge the hospitals; but though these appeals have met with a generous response the pressure still increases, because no attempt has been made to deal with the root of the evil—namely, the indiscriminate extension of charity." The Report then goes on to show that whereas the total number of cases treated by the medical charities of Birmingham amounted to 67,000 in 1867 they were equal to 166,000 in 1887. The population of Birmingham was 325,895 in 1867. In 1877 it had increased 15·81 per cent. and reached the figure of 377,436. In 1887 the population was estimated at 441,095, an increase of about 35 per cent. in the twenty years. But the ratio of patients treated by the medical charities as compared to the population was 1 in 5 in 1867, 1 in 3·5 in 1877, and 1 in 2·6 in 1887. This is an increase in the number of patients as compared to the population equal to 147 per cent., though the population only increased 35 per cent. Thus the number of hospital patients during these twenty years augmented more than four times as rapidly as the population of the town. These figures, however, must not be taken too literally. There are a good many patients in the Birmingham hospitals who come from out-lying districts and from other towns. Also the hospital returns are not correct in the sense that a patient may be entered twice over in the same year, and is reckoned as two patients, when the entry refers to one and the same individual. But these reservations apply equally well to the figures given for 1867 as to those for 1887. The proportion of the increase stands as stated, it is the proportion of patients as compared with the population which must be reduced. The report says, however, that there can be but little doubt that one-third, not of the sick, but of the whole population, receives gratuitous medical treatment during the course of twelve months from the hospitals.

The preliminary report of the committee also deals with the question of the Hospital Saturday Fund, but this phase of the problem is so important that it must be treated separately. The report concluded with the opinion that a large portion of the work done in the out-patients' department of the hospitals should be relegated to provident dispensaries, and that those who are too poor to join such institutions should come under the Poor-law. The voluntary hospitals should only deal with severe cases, and when necessary the provident dispensaries and the Poor-law infirmaries should be available for purposes of medical education. The report finally deprecated any idea of effecting suddenly radical changes, but urged the necessity of a fuller inquiry. This preliminary report of the committee was submitted to an influential meeting of the profession held on Nov. 20th, 1889. All medical men within a radius of twenty-five miles had been invited, and ninety medical men were present. The meeting unanimously voted "that the statements contained in the report are deserving of the serious attention of the public and the administrators of medical charities."

Further resolutions urged that an inquiry should be held, and that a committee should be elected to represent the profession, which should approach the mayor with a view to convoking a conference on the subject. This was done, and a numerously attended conference met in the council chamber on Jan. 15th, 1890. After a lengthy discussion it was resolved that the mayor should appoint a committee of

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *concluded*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *concluded*) Dec. 12th, 1896, Liverpool; (5) Jan. 2nd, 1897, Manchester; (5 *continued*) Jan. 9th, 1897, Manchester; (5 *concluded*) Jan. 23rd, 1897, Manchester; (6) Feb. 6th, 1897, Leeds; (6 *concluded*) Feb. 13th, 1897, Leeds; (7) April 17th, 1897, Coventry; (8) May 1st, 1897, The Royal London Ophthalmic Hospital; (9) May 8th, 1897, France, United Action and Legislative Action; (10) May 15th, 1897, Leicester; and (11) June 5th, 1897, Nottingham.

inquiry, and the mayor nominated Judge Chalmers as chairman of this committee of inquiry. The committee consisted of Mr. C. T. Saunders or Mr. J. C. Holder, for the General Hospital; the Rev. J. C. Blissard, for the Queen's Hospital; Mr. F. Keep or Mr. Alderman Lloyd, for the General Dispensary; Mr. Councillor Ball, for the Hospital Saturday Committee; Mr. R. H. Taunton, for the Children's, the Eye, and the Women's Hospitals; and Dr. A. Harvey, Dr. Rickards, and Mr. Priestley Smith, for the medical profession. Mr. W. S Pritchett was secretary of the committee.

This committee held seventeen meetings, examined a number of witnesses, and finally issued a printed report. With regard to in-patients this report stated that though possibly there may have been isolated cases of abuse there need be no apprehension that money was wasted in this respect. The average cost of in-patients varied from £2 17*s.* in some hospitals to £4 10*s.* in others, while the average cost of each out-patient was only about one shilling. The committee agreed with the report of the previous committee as to the enormous increase in the proportion of persons receiving treatment at the hospitals, and stated that, "making allowance for certain sources of fallacy, they estimate from these figures that at the present time about one-third of the population of Birmingham, apart from the pauper class, receive gratuitous medical treatment in the course of twelve months." While these figures bore testimony to the high estimation in which the hospitals and their staffs are held by the public they proved that the medical staffs were overworked by the swarms of out-patients who crowd the hospitals. Therefore, complicated cases could not receive the prolonged investigation necessary and there was not time to give proper instruction to the students. The question of numbers did not, however, prove that rich people frequented the hospitals, and in dealing with abuse the committee seemed somewhat at a loss when it came to consider for what class of persons hospitals were really intended. The committee stated that "as long as the hospitals are independent institutions, free from any controlling authority, it is clear that each hospital has the power to determine for itself to what class of persons it shall open it doors." Still the feeling seemed to be that hospital patients should constitute a middle zone between paupers and the well-to-do classes. The destitute have greater advantages in resorting to the Poor-law than to the hospitals because they can then obtain food, clothing, fuel, &c., as well as medical treatment. Besides, at Birmingham out-door medical relief is admirably organised by the Poor-law guardians. There are medical stations in different parts of the town where patients can call or send for the medical officer to attend to them at their own homes. Medical treatment is always granted in the first instance, but if the patient is able to pay the guardians are empowered by law to recover the amount due. It should further be noted, and this is very important, that the receipt of out-door medical relief does not involve any civil disqualification. Under such circumstances nearly all the out-door patients of hospitals might be referred to the Poor-law, but the committee was of opinion that the receipt of Poor-law relief had a demoralising effect and that the wealthy classes do well to subscribe to hospitals so as to prevent this result. In the abstract it is difficult to see why the receipt of charity from a hospital should be less degrading than the receipt of charity out of the rates; but in practice a great difference does exist—at least, in the minds of the people. Indeed, this accounts in a measure for the readiness with which the working classes subscribe to the hospitals.

The report then proceeds to deal with the difficulty of establishing a wage limit, for so much depends on the incidence of the illness; and it adds that "wherever the line should be drawn between fit and unfit cases the great weight of the evidence shows that as regards out-patients it is widely transgressed in Birmingham." There was conclusive evidence that the hospitals are largely resorted to in trivial cases. According to Dr. Simon there were 4000 trivial out of 10,000 cases. "Mr. Jordan Lloyd stated that very many of the cases he attended at the Children's Hospital were cases of neglected dirt. Mr. Lawson Tait was of opinion that many patients came to the Hospital for Women 'to see old friends and make new ones.' When they came to be medically examined they described impossible symptoms, and he found that there was nothing the matter with them. Mr. Marsh, on the day he gave his evidence, had been consulted at the hospital for a spot on the arm which proved to be a flea-bite, for a small, superficial abscess, and by a woman who thought she must have a cancer because her husband was said to have it." The committee were of opinion that all cases that could be efficiently treated by any qualified practitioner and which required no special medical or surgical skill were unfit for the hospitals. Most of such cases could be met by the payment of the ordinary medical fee or by joining a provident society. The hospitals should not compete against such societies by opening their doors to all comers. But of course the public would prefer to obtain the advice of a hospital surgeon or physician of high reputation rather than that of the medical officers of clubs. It is for the hospitals to shut their doors against such cases.

As the work done by the visiting staff is unpaid, it might be urged that the pressure could be reduced by increasing the staff. Such increase would, however, lower the reputation of the hospital staffs, prevent the best men in the profession from competing for these appointments, and the committee urged that "such a result would be disastrous, for, in the first place, the poor would no longer be able to command the highest medical skill, and in the second place, the rising generation of students would no longer be taught by the best men."

The committee was of the opinion that it was the fault of the hospitals themselves if unfit cases were admitted, but that this could not be prevented unless all the hospitals combined to exclude such applicants. "Any partial reform would be likely to shift the unfit cases from one hospital, or group of hospitals, to another." It was suggested that patients should only be admitted if recommended by a qualified medical practitioner or by a provident association or dispensary the rules of which were approved by the hospitals. This would be a stimulant to the good provident societies and "the hospitals would resume their special function of giving second or consulting opinions to the deserving poor." To carry out these reforms the committee proposed that a general council should be formed at which the managers of the Saturday and Sunday Hospital Funds should send representatives. The general dispensary, the city corporation as responsible for the city hospital, the guardians as responsible for the workhouse infirmary and for out-door medical relief, should also send representatives; and these, together with the delegates of all the hospitals, would fully reflect the opinions of the public medical institutions. The report of the committee, however, proceeds in a great measure to stultify itself by insisting that this council "would be almost purely consultative. It would have no power of forcing its opinions on individual institutions, except in so far as it could bring public opinion to bear on them. It might or might not be advisable that some such council as suggested should have certain controlling powers over hospitals, but those powers could only be given by the Legislature. It is obviously beyond the province of the committee to go into any suggestion involving more than voluntary coöperation between the existing hospitals."

This last quotation is a good illustration of the utter want of backbone that characterised all the efforts made at Birmingham. To say that a general council, constituted as suggested above, would have no power is either false in fact or it means that it is not worth while bringing such a council into existence. It seems, on the contrary, that a representative body of this description, if it was determined and earnest in its purpose, could exercise strong coercive powers. If this general council agreed by a large majority that certain rules should be enforced, how could any individual hospital resist? First, the Saturday and Sunday Hospital Funds would cease to contribute to the recalcitrant hospital. Then the general council would lay the whole matter before the public and call upon the subscribers to cease their subscriptions. Finally, they might invite the honorary medical staff to withdraw from the institution in question and make it somewhat difficult for the staff to refuse. It seems that a general council could easily ruin any institution or hospital that refused to submit and agree to the common discipline, but, of course, the members of such a council must be determined, must mean business, and must be ready to fight with every weapon available, instead of being satisfied with mere flabby conversation. The report of the committee concluded with the five following recommendations:

"1. The formation of a General Council representative of all the public medical institutions of the city.

"2. The formation of an inquiry agency to investigate the circumstances of applicants for treatment at the hospitals.

"3. That apart from first aid, and urgent cases, regulations should be framed by the hospitals to exclude trivial cases and cases where the patients are in a position to pay for such treatment as they may require.

"4. That facilities should be given for cases so excluded being dealt with by dispensaries or provident associations.

"5. That any person recommended by an approved provident association, or by a qualified medical practitioner should, as a rule, be admitted to the out-patient departments of the hospitals without further formality."

Though these recommendations may be open to criticism, and might be enlarged, they constitute for all practical purposes a good working basis. A programme may be more or less good; that is a matter of secondary importance; the whole question rests on the activity shown in realising the programme. An imperfect programme applied is better than a perfect scheme which is merely set down on paper. The real point is not what the Committee and the medical profession said, but what they did. In this respect it is difficult, while keeping within the bounds of courtesy, to describe and qualify what followed the publication of the Report of the Hospital Reform Inquiry Committee. Never was a reform movement on this subject launched under better and more influential auspices, and yet never did a movement so utterly collapse. The report when published was universally approved and with equal unanimity universally neglected.

This extraordinary collapse is explained in various ways. It is urged that the local press never really took the matter up. A principal lay manager of the General Hospital was opposed to reforms. As this is the largest hospital, it is difficult for the other hospitals to move without the approval of the General Hospital, and it cannot be said that the committee of this hospital has shown any very particular deference to the opinions of its medical staff. The managers of hospitals are to a great extent recruited from among the successful merchant class. Outward and visible success is their aim, and so long as the hospital they patronise has the largest number of beds and of patients they think the end is attained. Hence a spirit of competition was introduced which blocked the attempt at reform. Though the medical staff of the General Hospital had largely contributed to bring about the inquiry, when that hospital was invited to join in forming the proposed general council it failed to send any reply. Month after month passed by, and it was only when the agitation had simmered down and lost all its impetus that the General Hospital at last sent an answer. The impression seems to be that it was the delay on the part of this, the most important medical charity in Birmingham, that killed the movement. It has been urged that the Ethical Section of the British Medical Association should have pursued the matter; but in answer it is stated that they are only a consultative body and cannot take the initiative in any question. If so, it is high time that some organisation should be constituted which can take the initiative. An influential committee is appointed, an exhaustive report is issued, the whole of the profession agrees with its conclusions, and yet seven years are allowed to elapse without anything whatever being done. It suffices that a few laymen, members of hospital committees, should disapprove or fail to understand the necessity of the proposed reforms, and the whole of the medical profession is scattered like chaff in all directions, loses what little cohesion it had acquired, and quiescently allows the grievances it had proved and denounced to go from bad to worse.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Netherfield-road Hospital for Infectious Diseases.

THE formal opening of the extension of the City Hospital North, Netherfield-road, took place on the 22nd inst. in the presence of the Lord Mayor. This hospital up to the year 1886 was carried on as a charitable institution for the treatment of infectious diseases. By the passing of the Liverpool Improvement Act, 1886, the corporation had vested in them the control of the Netherland-road Hospital. Several additions and alterations were subsequently made, comprising the erection of a new administrative block, laundry, mortuary, and boundary walls; a complete system of drainage was also introduced, together with new roadways, at a total cost of £13,640. By these means provision was made for ninety-six beds. In the year 1895 further improvements were made at a cost of £1000. The present extension comprises two new pavilions, having two wards in each pavilion, with ten beds in each ward, making a total of forty beds; also an isolation block, containing four wards with ten beds, additional accommodation being thus provided for fifty patients; by means of this enlargement the total accommodation is brought up to 146 beds. The laundry buildings have also been extended and provided with new machinery and fittings; these are to be used exclusively for cleansing patients' clothing, the old appliances being reserved for the use of the staff. A new lodge has been erected containing discharging-rooms, waiting-rooms, &c. The administrative block has also been enlarged, giving additional bedrooms for ten nurses and eight servants, the total staff now consisting of one resident medical officer, matron, twenty-five nurses, five porters, and twenty-two servants, total fifty-four, as against thirty-two prior to the extension. A new approach of easier gradient has also been made. The total cost of this scheme, including the cost of property purchased, furnishing, electric lighting, drainage, and laundry machinery, amounted to £26,000, while the area of the recent extension is 5500 square yards, thus enlarging the area of the hospital to 15,140 square yards. Each patient has 144 feet of floor space, and there are 12 lineal feet between each bed. At present there are sixty-four patients in the hospital, and it is gratifying to know that there is not one case of small-pox in any of the city hospitals.

The New Professorship at University College, Liverpool.

The conversion of the lecturership on hygiene at University College, Liverpool, into a Professorship of Public Health, alluded to in THE LANCET of July 24th, follows on the scheme matured by the College authorities for developing within the College a school of sanitary science, a full description of which was given in a former number of THE LANCET. Dr. Hope, who has been promoted to the new professorship, was appointed Lecturer on Hygiene in the year 1885, and in the following year became examiner in Public Health at the Victoria University. By reason of becoming a member of the professorial staff Dr. Hope will in future have a seat in the Senate of the College.

Distribution of the Hospital Sunday and Saturday Funds.

The joint committee of the Hospital Sunday and Saturday Funds have distributed £11,400 among the various Liverpool charities, being an increase of £400 on the previous year. There was a falling off in the Hospital Sunday Fund, but, on the other hand, the Hospital Saturday Fund shows an increase of £500 as compared with last year. The amount received by the Hospital Sunday Fund was £6028 and by the Hospital Saturday Fund £5726.

July 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Post-Graduate Classes in Edinburgh.

ARRANGEMENTS have been made at Surgeons' Hall for a series of courses in the following subjects, to commence simultaneously on or about Sept. 27th:—Anatomy (Medical and Surgical), Bacteriology, Central Nervous System (Anatomy and Pathology of), Dermatology, Diseases of the Chest, Children, Ear, Throat, and Nose, Demonstration of Modern Gastric Methods, Electricity in Medicine, Gynæcology, Infectious Diseases, Ophthalmology, Ophthalmoscopy, Pathology, Practical Sanitation, Surgery (Clinical, Practical, and Operative), and Minor Surgery in Children.

The Hospital Difficulty at Aboyne, Aberdeenshire.

Sir W. Cunliffe Brooks, Bart., of Glen Tana, Aboyne, having, as stated in THE LANCET of July 17th, offered to pay £1000 if the fever hospital at present being erected about half a mile east from the village of Aboyne were transferred to a more isolated site, the Deeside District Committee have re-considered the question. While agreeing to take all steps to defend their action in view of an appeal by ratepayers to the county council, the district committee remitted to a sub-committee powers to meet

with the objectors and to make an arrangement with them. The Marquis of Huntly, from whom the present site was acquired, suggested a new site about half a mile farther east, and Dr. Watt, county medical officer, and Mr. G. G. Jenkins, the architect, are to report as to its suitability.

Women Students of Medicine at Aberdeen.

The graduation list of the University of Aberdeen on this occasion shows that one woman student has passed the first professional, while three others have passed the first portion of the same examination.

July 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons in Ireland.

THE Prince of Wales, on behalf of the Queen, recently received a deputation from the Royal College of Surgeons in Ireland, consisting of Mr. William Thomson, President; Mr. R. L. Swan, Vice-President; Sir Charles Cameron, Secretary of Council; Mr. A. H. Jacob, Mr. F. T. Heuston, and Mr. L. H. Ormsby, Members of the Council.

The Outbreak of Beri-beri at the Richmond Asylum, Dublin.

There have been 124 cases of beri-beri in the Richmond Asylum since the new outbreak—a fact the significance of which needs no comment.

The Royal Academy of Medicine in Ireland.

The deputation from the Royal Academy of Medicine in Ireland, which was recently received by H.R.H. the Prince of Wales at St. James's Palace, consisted of Dr. James Little, President; Mr. John B. Story, Secretary; Mr. William Thomson, Dr. George F. Duffey, Dr. John W. Moore, and Mr. F. T. Heuston.

Medical Superintendentships of Irish Lunatic Asylums.

The Moderator of the Irish Presbyterian Church (Rev. Professor Leitch, D.Lit.) interviewed Mr. Gerald Balfour (Chief Secretary for Ireland) on July 21st to urge the claims of Presbyterian medical men to a larger share in the medical superintendentships of lunatic asylums in Ireland. He pointed out that of twenty-three of these appointments seventeen were held by members of the Church of Ireland, while Presbyterians, though almost equal in numbers as a religious body, only held one. Mr. Balfour replied that he would give the matter his best attention, and expressed his surprise at the figures quoted, and said that Presbyterianism should disqualify no one while he was in office.

The Royal Victoria Hospital, Belfast.

At a meeting of the City Council of Belfast, held on July 22nd (the Lord Mayor presiding), a very large and influential deputation from the promoters of the Royal Victoria Hospital attended to apply for a portion of the grounds of the present lunatic asylum in Grosvenor-street as a site for the new hospital. The Sites' Committee of the hospital and the medical staff, after most careful consideration, have come to the conclusion that this is the best place, and the deputation asked the corporation to grant them ten acres, or to recommend the Board of Control of Asylums to agree to the introduction of a Parliamentary measure authorising the transfer of, say, five acres now, or as soon as possible, and an additional five acres when the same might become available. The deputation having retired, the Council passed a resolution recommending the Board of Control to agree to the allocation of six acres as a site, and, if feasible, an additional four if hereafter required, the Board of Control to promote the necessary measure. The proposed site is an elevated one with two frontages (one opposite the Dunville Park), and it will in every way be most suitable. The medical staff of the hospital were unanimous in recommending it.

Professorship of Zoology in the M'Gill University, Canada.

I have pleasure in announcing that Mr. Ernest W. McBride, M.A., B.Sc. (London University), Fellow of St. John's College, Cambridge, and Demonstrator of Animal Morphology in the Biological Laboratory of that university, has been appointed to the chair of Natural Science in the M'Gill University, Montreal, Canada. Mr. McBride, who is the son of a highly respected Belfast merchant (Mr. S. McBride), was a distinguished student of Queen's College, Belfast, where he held the Senior Scholarship in Natural History in session 1887–88. At Cambridge, in addition to a most brilliant academic career, Mr. McBride was President of the University Union, and he has done some most valuable original work contributed to the Royal Society. He is also a graduate of the London University.

July 27th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Normal Thromboses in the Placenta.

AT the Academy of Medicine M. Delore mentioned that he had frequently met with thromboses under the chorion in the placentæ of women who had shown no signs of illness. He had made some bacteriological researches and was able to state that all placentæ contain microbes and thromboses in varying quantities. The microbes in nearly all cases are found in the thrombi. He cited two illustrative cases, the first, that of a woman in good health, a primipara, who had a perfectly natural labour lasting three hours. The placenta was placed in an aseptic box and the chorionic face was found covered with thrombi, and out of eight cultivations made from these seven gave positive results, micrococci, diplococci, and streptococci being found. The puerperium was, however, absolutely free from any complications. In the second case the woman was ill during her pregnancy, and had previously suffered from endometritis. Only a few thrombi were found, but many microbes. There are then normally found in the placenta microbes both living and virulent, and the researches of Desaubry and Bordier have shown that in the dog, after the assimilation of fat, there is found in the lymphatic and venous systems an abundance of microbes. It is probable that the same result follows in the pregnant woman after a heavy meal. As it is necessary that these microbes should not enter the fœtus the decolourised thrombi would seem to be a means of resistance and of protection for the fœtus employed by the organism against them.

The Antitoxin Treatment of Tetanus.

M. Nocard has brought forward a somewhat encouraging communication on the Treatment of Tetanus by Antitoxin. Experiments alone can solve this question, and those of M. Nocard were carried out with a toxin prepared at the Pasteur Institute in the form of powder and so virulent that 6 mgs. are enough to produce a fatal tetanus in the horse. If the immunising powers of the two anti-tetanus serums prepared by Hoechst and by the Institute are compared it will be found that they are not quite identical. An intravenous injection of either has no power to arrest the progress of tetanus once declared. Fairly satisfactory results obtain if the injection is made twenty-four hours before the appearance of the first tetanic symptoms, but the dose must be considerable. If injected forty-eight hours previously to the appearance of the tetanic symptoms the serum is almost always effectual, but the dose must be large and injected straight into the veins. Finally, if the serum be injected within twelve hours after the toxin has been injected the animal resists to a wonderful degree. If these conditions are adhered to the serum treatment would seem very effectual.

Stealing Inoculated Rabbits.

Parisians have been greatly alarmed by learning through the daily press that a robbery had taken place at the Aubervilliers Hospital, which is specially devoted to contagious diseases. A quantity of rabbits inoculated for some researches of M. Roger have been stolen, and they had been inoculated with diphtheria, tetanus, typhus, cholera, &c. As it is probable that the thieves sold the rabbits to dealers, everyone who supped off rabbit that evening is consumed with a horrible fear of having caught some infection. Interviews have been published with Dr. Roux and other authorities, and instructions have been given to the octroi officials to stop the entry of such rabbits, their carcases being easily recognisable by having been shaved for the purpose of inoculation. In case they come in skinned, instructions have been given for a very prolonged cooking, which, according to

Dr. Roux, would render them harmless as regards infection. "Scientific" thefts have been frequent of late. Last week there were stolen from the laboratory of M. Gautier a Ruhmkorff coil, a cage of birds, and some thirty white rats.

A Pasteur Medallion.

In December, 1894, the Municipal Council decided to place upon the wall of the higher normal school in the Rue d'Ulm opposite the building which was for a long time the laboratory of Pasteur some commemorative tablet. It was to consist of a black marble plaque with a medallion of the illustrious *savant*, and its execution was entrusted to a pupil of Roty. Until lately the plaque alone had been fixed, but at the end of last week the medallion was added, without, however, any ceremony. It is of bronze on a gilded base, and surrounded by a crown of oak and laurel in rose-coloured marble. The features of the great man have been reproduced from the celebrated medal of Roty.

Professional Secrecy and Divorce.

The *Cour de Cassation* has just decided, on the opinion of M. Falcimaigne, that "if it is ever allowable for a medical man to make known by letter to the wife of a patient who has confided in him the cause or nature of his illness, the rules of professional secrecy forbid him to authorise the said woman to publish the said letters, and especially as evidence upon which to demand a separation or plea of divorce. Such evidence would not be admitted by the court, even if given in with the consent of the medical man who wrote the letters."

Medical Responsibility.

Dr. Lassalette, who was condemned on June 12th to two months' imprisonment and a fine of 500 francs for the death of a patient who had been operated upon by him for the removal of a fibroma by laparotomy, and in whom at the post-mortem examination a forgotten pair of forceps was found, entered an appeal, but the only result was that his imprisonment was increased to three months.

July 26th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Bacillus Icteroides.

FROM Montevideo a fact reaches me which may be taken as a measure of the enthusiasm aroused by the "bacillus icteroides" and its discoverer. Dr. Antonio Quesada, a resident at Paso de los Toros, presented himself the other day at the Hygienic Institute of that city and asked for an interview with its director, Dr. Sanarelli. On being admitted he stated the object of his visit to be neither more nor less than this—to subject himself, under Dr. Sanarelli's eye, to inoculation with the bacillus icteroides. Dr. Sanarelli, while fully appreciating his courage and devotion to medicine and humanity, admonished him as to the risks he would incur and tried to dissuade him from his purpose. But Dr. Quesada remaining resolute, nay, expressing his determination to undergo the ordeal at other hands rather than not undergo it at all, Dr. Sanarelli had finally to give way and accept his offer. The experiment accordingly is imminent. Dr. Quesada will be accommodated in a special ward and be placed under the surveillance of a commission composed of three Uruguayan physicians and three of foreign nationality. With the inoculation of the bacillus the clinical observations will begin. The commission will examine with scrupulous care the respiration, the blood in its constituents and circulation, the several excreta—every channel, in short, through which a pathognomonic sign characteristic of yellow fever may be looked for. The effect of the inoculation ought to be instantaneous. After two days—always assuming that no complications supervene—the self-constituted "subject" to yellow fever will enter on convalescence and—still excluding complications or unforeseen contingencies—ought to be well in a week. The public, professional and lay, are awaiting the result of the experiment with intense curiosity, as a practical test of the validity of Dr. Sanarelli's findings and conclusions. Dr. Quesada, I may add, is a man of robust constitution and in the prime of life—forty-two years of age. He has served as an army surgeon with the Spanish forces in Morocco, in the Philippine Islands, and in Cuba, where he availed himself of his many opportunities of studying yellow fever. He has suffered from dysentery, and various febrile disorders, including malaria, but never, I believe, from yellow fever proper. He is, moreover, a professional man of exceptionally refined culture and, according to one who knows him well, "nutre molta fiducia nella scoperta di Sanarelli" (cherishes great confidence in the discovery of Sanarelli).

The National Medical Congress.

The "Congresso Medico Nazionale" will shortly be held at Bergamo, the picturesque, historical town on the Italian slopes of the Alps, and those of the profession from the English-speaking world who are taking their holiday in these regions might do worse than look in during its proceedings. Dr. Antonini, Superintendent of the Bergamasque Lunatic Asylum, acts as secretary to the Congress and, through his courtesy, I can anticipate the agenda-paper, so far at least as to specify the following themes to be introduced and discussed during the sittings: "The Application of Tuberculin for the Prophylaxis of Tuberculosis in the Lower Animals and in Man"; "The Question of Tuberculous Animal Food in its bearings on the Public Health"; "The Profession in its Relations to the Prophylaxis and Treatment of Tuberculosis"; "The Medical Attitude towards Consanguineous Marriages." This last is a very elaborate paper to be introduced by a special report from the pen of Dr. Roberto Massalongo, Professor of Special Pathology in the University of Padua. Among the other contributions I may signalise "The Necessity of a Federation among the Italian Medical Associations," leading up, I presume, to a discussion on the Santini Bill now before Parliament to put Italy in line with Switzerland and France in excluding from practice all English-speaking practitioners unprovided with an Italian diploma. From all I can gather our Italian *confrères* are by no means unanimous as to the wisdom or even economic advantage of legislation in Dr. Santini's sense. The "Prophylaxis of Pellagra" is another paper sure to contain much that is interesting, if only for the names of its "Relatori" (Dr. Marzachi and Dr. Antonini). "Hygienic Surveillance in Rural Communes" will be dealt with by Dr. Prati, while "The Organisation of Obstetric Assistance in Town and Country" will be introduced by a past-master of the subject, Professor Landucci, of the Padua school. Italian medicine will be powerfully represented at the Congress, which, taking into account the preparations on foot for its participants, native and foreign, will open with every prospect of brilliant success.

Dr. Maurizio Sacchi.

Just before closing the desk I receive an announcement which throws very grave doubt on the reported safety of the surgeon of the ill-starred Bottego expedition. "Contrary to the affirmations contained in the letter of Ras Maconnen," writes my informant, "according to which Dr. Maurizio Sacchi was in perfect health at Shoa, his family have received from the Consulta (the Italian Foreign Office) an intimation to the effect that the doctor, who had been intrusted by Captain Bottego with a caravan conveying a large quantity of ivory and whose escort consisted of but a few Ascari, had been attacked and robbed near Lake Rodolfo, and, while defending himself, savagely murdered. Evidently," adds the correspondent, "Dr. Sacchi was making for some seaport of the Benadir to discharge the commission confided to him by Captain Bottego."

July 25th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Census of Population.

FIFTEEN years ago an inaccurate and incomplete census was taken of Egyptian towns by the Government. The time was ill-chosen, for the urban population was engaged in revolt against the Khedive, many Europeans and others had fled the country, and those who remained were too frightened of the Arabi Pasha *régime* to answer questions truly. The consequence was that the numbers published were considerably below reality, and as no attempt has been made since then to correct them the birth-rate and death-rate calculated on the 1882 census have been notably absurd. This year the Egyptian Government succeeded in getting £30,000 from the Caisse de la Dette Publique for the expenses of a new census, and after a preliminary trial the numbering of the people took place on June 1st, which happened to

correspond with the first day of the Mussulman year. Everyone expected a considerable increase, but it looks, from the figures already published, as if the population of Egypt will have in future to be reckoned as nearer nine than six millions, and, if so, this will bring down the average death-rate from about 45 to 30 per 1000. The totals of 41 towns give an increase of 490,979 people, including the following additions:—Cairo, 201,562; Alexandria, 88,371; Port Said, 18,748; and Tantah, 23,538.

Control of Prostitutes.

Regulations have lately been made by the Ministry of the Interior for all houses where two or more habitual prostitutes live. Permission must be applied for in writing by the owner of the house, and licences are only issued to those quarters of the town chosen by the Governor or Mudir. Minors and ex-prisoners are disqualified, and a list of all residents and servants must be furnished. All women under the age of fifty years must be medically examined once a week, and those found to be ill are sent to the Government hospital. Inmates are not allowed to solicit publicly, and are not even to stand at their doors or windows. There is to be no gambling, police may inspect by day, and punishment for breach of rules is by fines of ten or twenty shillings, or by imprisonment from three to seven days. Thus it will be seen that Egypt is following the example of Malta rather than that of India, China, England, and the Straits Settlements. However, in Egypt there has been a certain amount of compulsory examination of native women since 1882. It is to be hoped that India will soon follow suit. This year's returns from Simla state that one-seventh of the whole British garrison may now be taken as ineffective in case of war.

Heluan-les-Bains.

Heluan has been for years considered as a future sanitarium, and it now looks as if its opportunity had really come. Last year a Government concession for the baths and two hotels was given to a rich company which already owns about £100,000 worth of property in Heluan and the railway connecting it with Cairo. The company decided to try to attract English visitors, and were fortunate in their choice of a resident physician. An entirely new bath establishment is to be built at once, and in the meantime there are fifteen baths for both sexes, two needle baths, and inhalation of sulphur spray vapour for bronchitis, as at Marlioz. A European masseur and masseuse are ready for the treatment of rheumatic and lung patients. The air of the desert—only sixteen miles from the luxuries of Cairo—is of unrivalled purity and dryness, for the Nile is two and a half miles away from the hotels, and the nearest cultivated ground is two miles distant. One hotel provides accommodation for 120 visitors, others for smaller numbers, and there are rapidly springing up a few boarding-houses and private houses for invalids. Altogether, about 250 people can now be comfortably housed. For amusements in this desert retreat the following have been provided: croquet, bowls, quoits, golf, practice cricket, and lawn tennis. Sand carts with ponies, riding horses, camels, donkeys, bicycles, a steam launch and sailing boats can all be hired. The nucleus of a good library also exists, and there are a swimming bath and a dark room for photography, and the management provides occasional concerts and an English military band once a week. A new era has dawned for Heluan, and an additional attraction is provided for invalids coming to Egypt.

Water Filtration by Native Filters.

Experiments show that the Egyptian filter jars of Nile mud which are universally used by Europeans and by some natives of the better class are useless when they are quite new, or much more than a year old. They are never very trustworthy, but they are apparently at their best when they have been used for eight, nine, or ten months. This is due to the inside coating of slime, which acts as the best filtering medium, as was pointed out by Professor Koch at Hamburg. When the filters (*ziehs*) are new they allow thousands of micro-organisms per cubic centimetre to pass through. A filter eighteen months in use allowed 1535 to pass, though the unfiltered water only contained 5000 micro-organisms per cubic centimetre; while several other filters in use a shorter time only permitted 400 to pass through from the same unclean water. The experiments are sufficient to prove that the *ziek* can be trusted to remove mud, but not microbes.

Cairo, July 24th.

Obituary.

WILLIAM HENRY ROBERTSON, M.D. EDIN., F.R.C.P. LOND., J.P.

DR. W. H. ROBERTSON had resided in Buxton for so many years, and had figured so prominently in both the public and the social life of the town, that his death, which occurred on July 15th, after a short illness, is being felt as a serious loss by all classes of the inhabitants. He was born in September, 1810, and studied medicine in Edinburgh, of which city he was a native, taking the degree of M.D. at the university there in 1830, after which he practised for a short time in Chesterfield. Removing to Buxton about 1834, he took a house in the square and had a dispensary in Terrace-road, on which foundation he built up a practice that was not only exceptional in its duration as measured by lapse of years, but brought him a gratifying amount of solid professional reputation, and gave him opportunities in many ways of displaying his excellent administrative talents. At an early period in his career he studied the effect of the Buxton mineral water in the treatment of disease, and the subject was one which never lost interest for him, for as the result of mature experience he held that in properly selected cases of a rheumatic or gouty nature these waters were truly valuable. On this account he had a special regard for the original Buxton Bath Charity, of which he was at the time of his death the only surviving medical trustee, and was chairman of the trustees and board of management of the Devonshire Hospital and Buxton Bath Charity since January, 1866, in addition to which administrative position he had been an honorary medical officer of the institution for sixty years, and senior consulting physician since 1865. Dr. Robertson was also chairman of the Buxton Improvements Company (Limited) from its commencement in the year 1870, and after the company was in the year 1888 reconstituted as the Buxton Gardens Company (Limited) he continued to be annually re-elected its chairman. He was the oldest member of the Buxton bench of magistrates, having been appointed J.P. for Derbyshire in July, 1867. Dr. Robertson became a Fellow of the Royal College of Physicians of London in 1872. He was the author of several treatises, relating chiefly to the Buxton mineral water, and he also contributed some articles on the same subject to the columns of THE LANCET; his "Guide to the Use of the Buxton Waters" has reached a twenty-fourth edition. Dr. Robertson has left a widow, a daughter, and a son, the Rev. Gordon Robertson, M.A., who is vicar of Sutton-on-Trent, Newark. The funeral took place at Christ Church, Burbage, on July 19th. There was a very large attendance, and out of respect to the memory of the deceased all the places of business in the town were closed whilst it was in progress.

PROFESSOR PREYER.

THE death has been announced of Professor T. W. P. Preyer, of Jena. He was born at Moss Side, Manchester, in 1841, and after a preliminary education in London and Bonn, studied medicine at Bonn, Berlin, Vienna, Heidelberg, and Paris. He graduated at Bonn, and in 1867 was appointed Professor of Physiology at Jena. His work on "Blood Crystals" (1871) is well known, as also his study of mental development entitled "The Soul of the Child" (1882). He also wrote on the "Colour and Temperature Sense" (1881), and in 1883 published a work entitled "Elements of General Physiology."

WATKIN WILLIAM ROBERTS, F.R.C.S. ENG., &c.

MR. ROBERTS, who died at Carnarvon on July 24th, in his seventy-eighth year, after an illness of several weeks' duration, was an old and much respected inhabitant of the town, and had an extensive practice in the counties of Carnarvon and Anglesey. He was born at Garnedd, in West Anglesey, and received his first medical training from his uncle, Mr. William Roberts, who practised in Carnarvon. In 1840 he obtained the qualifications of M.R.C.S. Eng., and L.S.A.,

after which he held several dispensary appointments in Ireland; but more than forty years ago he returned to Carnarvon and made it his home. In 1856 Mr. Roberts became a Fellow of the Royal College of Surgeons of England; he was also a Justice of Peace for Carnarvon, and for many years had a seat on the town council, at first as a councillor and afterwards as an alderman. Mr. Roberts was a widower; he has left a son and six daughters.

FRANK CHANCE, M.B. CANTAB., F.R.C.P. LOND.

DR. CHANCE, of Burleigh House, Sydenham-hill, who died at Nice this month, was a scholar, and especially a linguist, of unusual attainments. He was born in Birmingham in 1826, and studied medicine at St. Bartholomew's Hospital and Cambridge University, graduating there as B.A. in 1854 and M.B. in 1855. His aptitude for the study of languages was already so well marked that while at Cambridge he gained the Tyrwhitt Hebrew scholarship, and subsequently edited "Bernard's Commentary on the Book of Job," which was published in 1864. He was also for many years a member of the Old Testament Revision Committee. Dr. Chance became a member of the Royal College of Physicians of London in 1859 and a Fellow in 1863, but he can scarcely be said to have engaged in practice to more than a nominal extent. In 1860 he published a translation of Virchow's "Cellular Pathology." Dr. Chance was a widower, and has left one daughter.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Hermann Wasserfuhr, an eminent hygienist of Berlin, at the age of seventy-four years. During the Franco-German War he organised the transport service for taking the wounded back, and he was afterwards employed in the arrangement of the medical department in Alsace and Lorraine. He wrote a good deal on military medical organisation, on malaria in Alsace, and on school hygiene, and was one of the founders of the *Vierteljahrsschrift für öffentliche Gesundheitspflege*.—Dr. Vigneron, Lecturer on Genito-Urinary Diseases in the Marseilles Medical School.—Dr. Delaissement, Surgeon to the Hotel Dieu, St. Quentin.—Dr. Don José Estéban Lorenzo, Clinical Professor of Surgery in the University of Salamanca.—Dr. Carlo Grillenzoni, formerly Professor of Anatomy in the Ferrara School of Medicine.—Dr. Dewindt, President of the Belgian Medical Federation.

THE BRITISH MEDICAL ASSOCIATION.

THE sixty-fifth annual meeting of the British Medical Association is to be held, as many of our readers know, in Montreal, but the general meeting for the transaction of business and consideration of Reports of Council and Committees and an extraordinary general meeting were held on Tuesday last at Exeter Hall, the latter meeting having been summoned in pursuance of the requisition of 100 members. Dr. H. BARNES, the President, occupied the chair.

The special business commenced with a motion by Mr. ARTHUR MAUDE in the following words:—

"That whereas long delay has taken place in giving effect to, and carrying into execution, certain resolutions of general meetings of this Association relating to the taking up of medical defence by the Association, and uncertainty is thereby imported whether such resolutions are binding upon the Association and the Council, and it is desirable that such uncertainty be removed, the following amendment of the twenty-fifth Article of Association be adopted as a special resolution; that is to say, that at the end of the twenty-fifth Article the following words be added—namely: 'And it shall be the duty of the Council to give effect to, or carry out as speedily as possible, all resolutions of general meeting, unless otherwise duly provided.'"

Mr. MAUDE, in speaking to his motion, said that he wished to clear the air of the doubt which existed in the minds of members as to the power of the Council and as to their own powers over the Council. He reminded the meeting that though the branches elected the Council (or rather some members of it) it made no difference in the responsibilities of the Council to the general meeting. The directors of a company were by law responsible to their shareholders in general meeting, however those directors might have been appointed.

Surgeon-Major POOLE seconded the motion.

Surgeon-Major INCE moved as an amendment:—

"That as the report of a strong committee on the subject of the reform of the constitution of the Association is about to be submitted to the members generally by the Council, any discussion upon a motion affecting the duties of the Council is for the present at least both premature and inexpedient."

Dr. BRASSEY BRIERLEY, Mr. LAWSON TAIT, and others continued the discussion. On the amendment being put to the meeting it was carried by 62 to 41. On the amendment being put as a substantive motion 71 voted for the motion, while 55 voted against it.

Dr. HUGH WOODS then brought forward the following motion:—

"That the Council of the British Medical Association be and is now hereby instructed to forthwith take all necessary steps to complete and legalise the special resolution adopted by the extraordinary general meeting held at Birmingham on the 13th day of July, 1896, and confirmed by that held at Carlisle on the 28th day of July, 1896, which resolution amplifies the Memorandum of Association, and provides explicitly for the application of the funds of the Association to the purposes of medical defence; and that until a detailed 'scheme' of medical defence shall be agreed to, the Council shall act in any case or matter of medical defence upon the instruction of a general meeting of the Association."

The concluding part of this motion was ruled out of order by the Chairman, and Dr. WOODS, in speaking to the remainder, accused the Council of having adopted the methods of the "heathen Chinee," dark and not straight. He also was understood to accuse the Council of having submitted the question of medical defence to the branches because they thought the branches would give a hostile vote, at which there were loud cries of "Withdraw," many members feeling that their good faith had been impugned.—The CHAIRMAN asked what was to be withdrawn, and Dr. Woods withdrew.—Mr. JACKSON, of Plymouth, having seconded the motion, a discussion followed, as a result of which Dr. WOODS withdrew his motion and an amendment was proposed by Dr. WELSFORD to the effect that the Council be instructed to take the necessary steps to confirm the alteration of the Memorandum of Association put forward at Birmingham in 1896. The amendment was carried by 65 to 64 votes. The figures being so close, a division was demanded, which resulted in 90 ayes against 89 noes.

Dr. RENTOUL withdrew a motion which he had on the agenda paper, and the meeting was about to adjourn when the result of the last division was called in question.

At two o'clock the meeting again assembled, when the Chairman stated that the first voting having resulted on a show of hands in 65 in favour of the amendment and 64 against it, there had been a division. On a division there were 89 in favour and 88 against. Under misconception as to what his powers were with regard to the giving of a vote he gave his vote against the resolution, so making the votes equal. "According to the Chairman's Handbook," he continued, "I ought not to have seen what the tendency was when I gave a vote. It will therefore be necessary to declare that the resolution was carried by a majority of one vote." This statement was loudly cheered.

The business of the extraordinary meeting being now concluded, Dr. Roddick, of Montreal, the President-elect, should have taken the chair at the general meeting, but in his absence Dr. H. Barnes, the retiring President, relinquished his seat to Dr. Saundby, the President of the Council. The usual congratulations and votes of thanks having been duly tendered, Mr. Wheelhouse and Sir Walter Foster were presented with the gold medals of merit, Dr. Saundby hanging them round the necks of these gentlemen. Dr. G. Sims Woodhead received the Stewart Prize, and Dr. Alexander Hill Griffith the Middlemore Prize. The building was then cleared of reporters while certain proceedings with regard to the proposed expulsion of two members from the Association took place, after which the members discussed the report of the Council and the reports of the various committees.

Dr. MYRTLE proposed:—

"That this meeting requests the Council to take definite steps to ascertain the opinion of members of the Association in the United Kingdom on the question of medical defence by means of an individual canvass by reply-paid letter or card."

This resolution was carried by 48 to 25. Subsequently it was decided to send this card to Colonial members also.

The balance-sheet coming before the meeting, Mr. LAWSON TAIT demanded to know where the costs in the case of Kingsbury *v.* Hart were to be found. After some anxious searching on the part of the Council the treasurer found them among the Association expenses, but this did not

satisfy Mr. Tait, who thought, first, that they ought not to have been paid by the Association at all, and secondly, that they should have been put down in the balance-sheet as a separate item. He, therefore, moved that the vote be reduced by the amount of the costs. Mr. Tait eventually withdrew his motion, not, however, before having said that "the gentleman who had been appointed to supervise the medical ethics of this case knew as much about medical ethics as did probably the Lord Chancellor."

The report of the Parliamentary Bills Committee drew forth some strong remarks about the Obstetric Nurses Bill, after which the meeting adjourned until Wednesday at 12 o'clock. After some formal business had been gone through, a lively discussion seemed probable on a motion by Mr. NELSON HARDY which was directed towards securing a vote to unattached members of the Association, but the motion was withdrawn on the understanding that the matter would come up for consideration later. Promise of some excitement, however, was given by Mr. LAWSON TAIT'S motion:—

"That 'inasmuch as it is specifically ordained in the ninth Article of the Association that the *British Medical Journal* shall be conducted by a paid editor, who shall be responsible for all that appears in its pages, except such matters as may be printed by direction of the Council. The *Journal* shall contain papers on medical science, and shall be considered the medium of communication between members of the Association'; it is desirable that the Council should exercise a more complete control over this paid editor, should secure the exclusion of such matter from the columns of the *Journal* as does not come within the strict limitation made in the said Article, and such matter as tends to defeat the legitimate objects of the *Journal*; and, further, should secure that the said editor is responsible under the terms of the ninth Article of the Association."

He complained that articles which were of paramount interest to the profession were often crowded out of the *Journal*. According to the Articles of Association the *Journal* should be conducted by a paid editor, who should be responsible for all that appeared in the *Journal* except such matters as might be ruled by the Council. The Reference Committee which was appointed by the Council was, therefore, totally illegal and improper. Mr. Tait then went on to ask how the mass of money for the payment of articles was distributed. The motion was afterwards withdrawn and the meeting adjourned.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—In July the following candidates passed in the subjects indicated:—

Surgery.—J. S. Barnes, St. Thomas's Hospital; A. R. Eates, Edinburgh; T. Jones, Middlesex Hospital; F. T. Knott, London Hospital; C. H. Maskew, Birmingham; A. R. O'Fflahertie, and J. F. Porter, London Hospital; B. C. Stevens, St. Thomas's Hospital and Durham; and F. H. Wilkinson, Liverpool.

Medicine.—A. R. Eates, Edinburgh; A. W. H. Edgelow, Charing-cross Hospital; R. S. Elvins, Birmingham; W. R. Kemp, Cambridge and St. Mary's Hospital; A. R. O'Fflahertie, and J. F. Porter, London Hospital; P. D. Pywell, St. Thomas's Hospital; W. F. Reckitt, Guy's Hospital; J. M. Ritchie, Birmingham and Durham; and B. C. Stevens, St. Thomas's Hospital and Durham.

Forensic Medicine.—F. W. Chesnaye, St. George's Hospital; A. R. Eates, Edinburgh; R. S. Elvins, Birmingham; W. R. Kemp, Cambridge and St. Mary's Hospital; J. F. Porter, London Hospital; P. D. Pywell, St. Thomas's Hospital; B. C. Stevens, St. Thomas's Hospital and Durham; and S. A. Stride, London Hospital.

Midwifery.—A. W. H. Edgelow and J. M. Edwards, Charing-cross Hospital; R. S. Elvins, Birmingham; W. R. Flint, St. Mary's Hospital; G. C. Hobbs, St. Bartholomew's Hospital; W. R. Kemp, Cambridge and St. Mary's Hospital; J. F. Porter, London Hospital; P. D. Pywell, St. Thomas's Hospital; B. C. Stevens, St. Thomas's Hospital and Durham; and J. M. Wood, Middlesex Hospital.

The diploma of the Society was granted to the following candidates entitling them to practise Medicine, Surgery, and Midwifery:—Messrs. A. R. Eates, T. Jones, W. R. Kemp, F. T. Knott, A. R. O'Fflahertie, J. F. Porter, W. F. Reckitt, B. C. Stevens, S. A. Stride, and F. H. Wilkinson.

UNIVERSITY OF ABERDEEN.—The following candidates have graduated as follows:—

Degree of Bachelor of Science (B.Sc.).—*Harold George Wickham Adan, Aberdeen; †Alexander Findlay, Aberdeen; and ‡William Coul McLaren, Dinnet.

Degree of M.D.—Charles Spencer Anderson, M.B., C.M., Swansea; Andrew Baxter, M.B., C.M., Darwen; Charles Harold Dyer, M.B., C.M., Cleckheaton, Yorks (under the new ordinances); Edward Meredith Griffiths, M.B., C.M., Abercarne, Newport, Mon.; James McRae, M.A., M.B., C.M., Huntly; Edmund Thomas Martin, M.B., C.M., Leeds; William Moir, M.B., C.M., Darwen (under the new ordinances); Duncan Neil, M.B., C.M., Acton; Williamson Rust Reith, M.A., M.B., C.M., Erdington, Birmingham; and James Ritchie, M.B., C.M., Liverpool.

Degrees of M.B. and C.M. (Old Ordinances).—John Veitch Easton, M.A., Inverness; William Hunter, Aberdeen; William Anderson Kinloch, Garmouth, Morayshire; Andrew Ross Laing, West Cults, Aberdeen; Herbert Frank Mitchell, Norwich; and John Alex. Rose, M.A., Cultercullen, Aberdeenshire.

Degrees of M.B. and Ch.B. (New Ordinances).—William Ainslie, Taitswell, Mintlaw, Aberdeenshire; William Howard Clark, Beccles, Suffolk; John Duff, New Noth, Gartly, Aberdeenshire; Henry William Garden, Lumsden, Aberdeenshire; William Scott Hall, Aberdeen; Alfred William Hare, Orleigh Mount, Lansdown, Bath; Andrew Alex. Robb, Aberdeen; John Roger, M.A., Kinbroon, Rothienorman, Aberdeenshire; Norman James Sinclair, Old Aberdeen; and George Albert Turner, Aberdeen.

William D. M. Donald, Banff, has passed the examinations for M.B. and Ch.B., but will not graduate until he has attained the necessary age.

Graduation Honours.—William Hunter graduates with Honourable Distinction.—John Murray Medal and Scholarship (awarded to the most distinguished graduate (M.B.) of 1897): Maurice George Robertson, M.A., M.B., C.M., Huntly. *Proxime accessit* Thomas W. Lumsden, M.B., Ch.B., Midmar. George Thompson Fellowship: William Hunter.

* With special distinction in Chemistry.
† With special distinction in Chemistry and Physiology.
‡ With honourable distinction. Old regulations.

The diploma in Public Health has been conferred on the following candidates:—

David Buchan, M.B., C.M. Aberd., Aberdeen; George Chalmers, M.B., C.M. Aberd., Huntly; William Ronaldson Clark, M.A., M.B., C.M. Aberd., Surgeon-Captain I.M.S., Bengal; George Melli, Duncan, M.B., C.M. Aberd., London; John Arthur Rinder Glennie, M.B., C.M. Aberd., Aberdeen; Thomas Harper, M.B., C.M. Aberd., Insch; Leonard Guscotte Haydon, M.B., C.M. Aberd., Exeter, Johnston Shearer, M.A., M.B., C.M. Aberd., Surgeon-Major I.M.S., Bengal; and James Samuel Hourston Walker, M.B., C.M. Edin., Nairn.

FOREIGN UNIVERSITY INTELLIGENCE.—*Erlangen:* Dr. Adolf Gessner has qualified as *privat-docent* of Gynæcology. He has been assistant medical officer in the University Gynæcological Clinic, Berlin. Dr. Kryger, assistant in the Surgical Clinic, has been recognised as *privat-docent* in Surgery.—*Heidelberg:* Dr. Georg Marwedel, first assistant in the Surgical Clinic, has qualified as *privat-docent* in Surgery.—*Iuriff (Dorpat):* Dr. Kessler, Extraordinary Professor of Gynæcology, has resigned.—*Munich:* Dr. Alfred Schönwerth has been recognised as *privat docent* in Surgery.—*Tübingen:* Professor Döderlein, of Gröningen, where he has only been for about three months, has been induced to move to Tübingen as Professor of Gynæcology.—*Vienna:* Dr. Lode has qualified as *privat-docent* of Hygiene.—*Würzburg:* Dr. A. J. Rosenberger has been appointed Extraordinary Professor of Forensic Medicine.

THE DIAMOND JUBILEE AND THE MEDICAL CORPORATIONS.—A Court was held at St. James's Palace on July 21st, when H.R.H. the Prince of Wales, on behalf of the Queen, received addresses from a number of public bodies, including the following medical corporations and associations consisting either wholly or in part of medical men, the names of the members of the respective deputations being given within parentheses:—The Royal College of Physicians of Ireland (Dr. G. F. Duffey, President, Dr. James Craig, Dr. J. W. Moore, Dr. James Little, and Dr. T. W. Grimshaw); the Royal College of Surgeons in Ireland (Mr. William Thomson, President, Mr. R. L. Swan, Mr. A. Jacob, Mr. Francis Heuston, and Mr. Lambert Ormsby); the Royal Academy of Medicine in Ireland (Dr. James Little, President, Mr. J. B. Story, Mr. Francis Heuston, Dr. G. F. Duffey, Mr. William Thomson, and Dr. J. W. Moore); the British Institute of Public Health (Professor W. R. Smith, President, Sir James N. Dick, K.C.B., Surgeon-Major-General J. Jameson, C.B., Sir James R. Andrew Clark, Bart., Dr. J. C. Thresh, and Mr. C. A. James, L.R.C.P. Lond.); the Incorporated Society of Medical Officers of Health (Surgeon-Lieutenant-Colonel G. P. Bate, President, Dr. E. Seaton, Dr. F. J. Allan, Dr. W. H. Kempster, Dr. Reginald Dudfield, and Mr. H. C. Jones); the University of Dublin (the Earl of Rosse, Mr. E. H. Carson, M.P., and Mr. W. E. H. Lecky, M.P.); the Royal University of Ireland (the Marquis of Dufferin and Ava, Sir Thomas Moffett, Mr. J. C. Meredith, LL.D., and Mr. Joseph McGrath, LL.D.); and the Coroners' Society (Mr. G. F. Roumieu, J.P., Dr. G. D. Thomas, Mr. S. Hacker, Mr. Braxton Hicks, Mr. Arthur Langham, and Mr. W. Schröder). The Prince's reply to each deputation was as follows: "On behalf of the Queen, my dear mother, I thank you for your loyal and dutiful address and for the affectionate congratulations which you tender on the completion of the sixtieth year of her reign. It is a source of profound joy to the Queen to receive the expressions of devotion to her person and family which are offered by her subjects throughout the empire. She is gladdened by the

thought that the sixty years of her reign have been years of progress in knowledge and of increase in prosperity, and she prays that, by the blessing of Almighty God, she may always live in the hearts of her loving and beloved people."

THE CAMBRIAN RAILWAYS.—We have received a handbook of scenery accessible from the Cambrian Railways, "Picturesque Wales," and a "Souvenir of Wild Wales," both of which will soon dispel any doubts, should such exist, of Wales being one of the most picturesque divisions of the British Isles. Wales, however, has a stronger claim than that of beauty to recommend itself to the health-seeker and tourist, for the air is, as a general rule, of the purest and the sanitation for the most part good. There are many facilities for convenient and cheap travel given by the railway companies, and those who are yet undecided "where to go" should certainly procure these two publications from the Cambrian Railways Company's offices at Oswestry.

DIPHTHERIA IN LONDON.—The deaths registered from diphtheria in London during the week ended July 10th numbered 43, having been 29, 24, and 32 in the three preceding weeks. The corrected decennial average for the twenty-seventh week of the period 1887-96 was 36, and was thus exceeded by 7. Of the 43 deaths, 2 were of infants, 31 others of children under five years of age, and only 1 of a person aged over twenty years. Eight of the deaths belonged to Camberwell, 4 to St. George, Southwark, and 3 to Poplar sanitary area. At the close of the week there were 914 persons under isolation in hospitals on account of diphtheria, the admissions during the week having been 163 in number, against 124, 119, and 152 in the preceding three weeks. In the Outer Ring there were 5 deaths registered in the week—namely, 2 in Bexley, and 1 in Wimbledon, in Acton, and in Stratford sub-districts respectively. For the week ended July 17th the deaths registered in London were 36 in number, the corrected decennial average for the particular week having been 37. Of the 36 deaths, 4 were of infants, and other 24 of children under 5 years of age, no death being of a person aged more than 20 years. Lambeth was credited with 4 of the deaths, and Islington, Mile End Old Town, and Poplar sanitary areas each with 3 deaths. On Saturday, July 17th, there were 927 patients still under treatment in hospital, the admissions during the week having been 136 in number. In the Outer Ring the registered deaths from diphtheria numbered 8—namely, 2 in Hillingdon, and 1 each in Wimbledon, Hayes, Tottenham, Edmonton, Enfield, and Leyton sub-districts.

WORCESTERSHIRE MEDICAL SOCIETY. — The quarterly meeting of this society was held by kind invitation of Dr. Stanley Haynes (Vice-President) at his house at Malvern on July 20th, Mr. T. Bates, of Worcester, being in the chair. Three new members were elected, and six members proposed for election at the next meeting.—Dr. Mabyn Read, medical officer of health of Worcester, read a paper on "The Antitoxin Treatment of Diphtheria," relating his experiences during the epidemic that occurred in the city during 1895. One hundred and thirty-seven cases were treated by him at the Isolation Hospital, with seventeen deaths. He expressed a strong opinion as to the great value of antitoxin in the treatment of diphtheria and found no detrimental effects of any consequence due to its use.—Inspector-General Cowan, M.D. Edin., R.N., Dr. Haynes, Mr. Moore, and others joined in the discussion, and Dr. Read having replied, the President thanked him for his excellent and interesting paper.—Dr. Pollard then read a paper on "The Clinical Aspects of Adenoids." After discussing some of the less well-known symptoms he expressed his preference for chloroform as an anæsthetic and Gottstein's curette as the most generally useful instrument for the operation required for the removal of the growths.—Mr. Bates showed (1) a patient from whom he had removed a Thyroid Cyst with Calcified Walls (the specimen also was exhibited); and (2) a Testis removed by Castration, which exemplified the various results of the tuberculous process when attacking that organ.—Mr. Holbeche showed (1) a man who had suffered from Compound Dislocation of the Ankle Joint, with Compound Comminuted Fracture of the Lower Third of the Fibula, followed by Delirium Tremens and Cellulitis of the Leg and Thigh, necessitating many incisions; notwithstanding all this, the man made a good recovery, with only slightly impaired movement of the ankle-joint; and (2) two children of a family, all of whom had been affected with Malformation of Fingers or Toes.

THE NEWPORT AND MONMOUTHSHIRE HOSPITAL.—The foundation stone of this hospital will be laid by Lord Tredegar on Aug. 2nd, when a large public demonstration will mark the event.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—The report and statistics of the Poplar and Stepney Sick Asylum District for the year ending Lady-day, 1897, show that during that period there were 3656 admissions into the asylum, 3134 discharges, and 532 deaths. The cost of food, fuel, light, and clothing for the paupers was £12,209, the weekly rate per head being 5s. 11*d.* for the first half year and 6s. 3*d.* for the second half year. The asylum contains 770 beds, of which 550 are allocated to Poplar Union and 220 to Stepney Union. The nursing staff consists of eight sisters, nine assistant nurses, seven staff nurses, one superintendent night nurse, and thirty-seven probationers. The medical superintendent is Mr. Charles Spurrell, F.R.C.S. Eng.

HARROGATE ROYAL BATHS. — An important addition to the public buildings of Harrogate has been made by the erection of the new baths, a handsome structure which has required about three years for completion. The Queen has graciously permitted the corporation to call it the Royal Baths, and it was formally opened on July 23rd by H.R.H. the Duke of Cambridge, who described the springs and the new buildings whereby their general use is so much facilitated as being advantageous, not only to the neighbourhood, but to the whole of England. The corporation naturally take the utmost interest in the success of this extension of the resources of the place, as was acknowledged by the Mayor, who stated that the suite of baths had been erected for the purpose of meeting the growing demands for the special modifications of bathing (including massage) introduced in recent years. The ground floor of the building contains the central hall or pump room, the gentlemen's baths, the ladies' baths, the general rooms, and the winter garden, the latter of which is 183 feet long, 42 feet wide, and 35 feet high under the glass roof. The Turkish bath, of course, requires a series of rooms, which are thoroughly well suited to their purpose and provided with every requisite. Beyond it is the "inhalation" room, the special feature of which is a sulphur water fountain rising in the middle, and giving off a vapour or fine spray which is inhaled by the occupants of the apartment. In the "pulverisation" room medicated water can be applied to the throat, eyes, &c. Among the other varieties of baths may be mentioned several kinds of douche baths, slipper baths, needle baths, the Harrogate combination bath, and the vapour-room, which is sometimes called a Russian bath. In the well-bath the water is deep enough to reach to the neck of a person standing upright. The crane-bath is one in which the bather is taken from an invalid chair and lowered into the water by a lift. The building is entirely lighted by electricity and heated by steam. It would appear that, owing to the public spirit and enterprise of the Harrogate Corporation, invalids in this country will be able to avail themselves of the most recent improvements in the application of baths to the treatment of disease without undergoing the fatigue and anxiety of a journey to some Continental health resort.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Public Health (Scotland) Bill.

THE medical profession scored a notable victory on the report stage of this Bill. In its original form the Bill provided for proceedings being taken by the local authority when nuisances were reported to it by the medical officer, but in the Grand Committee the sanitary inspector was added, this putting the medical officer and the sanitary inspector on the same level with regard to the certification of nuisances. On the report stage the Lord Advocate proposed as a compromise that the proceedings should be "upon a certificate by the medical officer, or after a report by the sanitary inspector, or otherwise." Sir William Priestley, Sir Walter Foster, and Sir Charles Cameron pressed the Lord Advocate to leave out all reference to the sanitary inspector, and they were so successful in their representations that the Lord Advocate agreed to withdraw his amendment, and to accept one in the name of Sir William Priestley leaving the local authority full discretion as to the steps they should take before instituting proceedings. Another

success was gained in connexion with Clause 45, which gives power to inspect premises where infectious disease is supposed to exist. Captain Sinclair moved to omit the power given to the sanitary inspector to enter and inspect. Dr. Clark insisted that this was giving the sanitary inspector power to diagnose disease, and several of the other medical members supported him. Sir Walter Foster expressed the view that the sanitary inspector should only enter the premises under the direction of the medical officer. In the end the Government decided to make the matter an open question, and on a division Captain Sinclair's motion was carried by 110 to 82 votes.

Indian Famine and Plague.

Sir William Wedderburn has given notice that in connexion with the Indian Budget he will ask the House of Commons to express the opinion "that a detailed and searching village inquiry should be instituted, in order to ascertain the causes which blight the industry of the cultivators and render them helpless to resist even the first attacks of famine and pestilence."

Withdrawal of the Lunacy Bill.

The Bill to amend the Lunacy Law got through all its stages in the House of Lords, but when it reached the House of Commons notice of opposition was given by Sir Henry Fowler, and in consequence Mr. Balfour at once withdrew the measure, saying that in the circumstances there could be no hope of passing it during the present session.

HOUSE OF LORDS.

FRIDAY, JULY 23RD.

London University Commission Bill.

The Duke of Devonshire moved the second reading of this Bill and said that it was substantially the same measure as that which passed last session through their lordships' House, but for which, unfortunately, time did not suffice in the House of Commons. Certain modifications had been introduced which were the result of communications which had been in progress during almost the whole of the session between those interested, and there was reason to hope that the difficulties which prevented the Bill from passing into law had been removed, and that it would pass now as practically an unopposed measure. He was sorry to say that very considerable time had elapsed since Lord Cowper's Commission reported, and during that time a very great change, he was happy to say, had taken place in the higher education of the City of London, and this had caused the necessity for certain alterations of procedure in the Bill. Almost the only point discussed in the House last year was that which affected, or was supposed to affect, denominational colleges, and principally King's College. The agreement which was arrived at last year had been embodied in somewhat different terms in the present Bill, and he believed it was now practically accepted by King's College and the principal bodies concerned, and was now not objected to by Lord Herschell, who took a strong line of opposition last year.—The Earl of Kimberley, after making some comments on the Bill, expressed the hope that it might be passed into law before the close of the present session.

HOUSE OF COMMONS.

THURSDAY, JULY 22ND.

Beri-beri in Ireland.

Mr. Carew asked the Chief Secretary to the Lord-Lieutenant of Ireland whether any, and what, steps were being taken to check the spread of beri-beri in the Richmond Lunatic Asylum. Was he aware that the disease originated in long overcrowding and that though the inspectors of lunatics as far back as 1891 made a special report to the governors complaining that the Board of Control had taken no action to meet in any way the urgent requirements of the institution with its vast population for increased accommodation, nothing had been done to meet the requirements beyond the erection of a few wooden sheds at the Richmond Asylum and a few temporary structures at Portrane, both condemned as insanitary and insufficient by Dr. Manson and Sir Thornley Stoker? And whether the first section of the permanent structure which the Board of Control was erecting at Portrane would not be available till March, 1899? and, if so, what steps would be taken in the meantime to relieve the congestion?—Mr. Gerald Balfour replied: The outbreak of beri-beri in the Richmond Asylum has been fostered by overcrowding, consequent on the rapid increase in the number of patients. Steps have been taken to meet this overcrowding by erecting temporary accommodation at the asylum, and also at Portrane, county Dublin. The patients attacked have, as far as possible, been isolated, and the buildings occupied by them have been disinfected. The present outbreak is, so far, of a very mild type. There has been only one death attributed to it, and the general death-rate of the institution was never lower. The disease, though fostered by overcrowding, does not, it is believed, originate *de novo* from that cause at least in this climate. The inspectors of lunatics did not make any complaint in 1891 that the Board of Control had taken no action to meet the urgent requirements of the institution for increased accommodation; but in their first memorandum of inspection they called the special attention of the Board of Governors to the overcrowding, and discussed the question of how increased accommodation could best be provided. Consequent on the reports of the inspectors numerous conferences were held between the Board of Control and the Board of Governors, and it was ultimately decided to build a new and fully equipped asylum to accommodate 1200 patients at Portrane. This asylum is now in course of erection, and it is anticipated that the first portion of it will be ready for the reception of patients in about twelve months. In addition, temporary accommodation has been provided at the Richmond Asylum for 298 patients, and at Portrane for 224, and further buildings are now being erected, which, it is anticipated, will make the total accommodation sufficient for the numbers at present in the asylum. The inspectors state that they are of opinion that these temporary buildings have been erected with the greatest care, and with every precaution that sanitation requires, and that they are similar to those erected recently at the London County Asylums to provide temporary accommodation.—Mr. T. M. Healy asked whether the right hon. gentleman would consider the desirability of getting a specialist to examine into and report upon this strange disease, or whether the right hon. gentleman had already obtained the opinion of a specialist with regard to it.—Mr. Gerald Balfour: I am under the impression that a specialist did visit the asylum and did report upon the disease, but the actual cause and origin of the outbreak still remains obscure.—Mr. T. M. Healy asked whether that document was public property.—Mr. Gerald Balfour: I am not quite certain on the point, but I will make inquiries with regard to it.

FRIDAY, JULY 23RD.

Medical Students and the Soudan.

Captain Norton asked the Under Secretary of State for War whether the War Office had already taken steps to obtain from the medical schools students who had not completed their studies with a view to the formation of an ambulance corps for service in the Soudan, or whether any such steps were in contemplation.—Mr. Brodrick: No force is being prepared in this country for service in the Soudan.

Candidates for the Army Medical Staff.

Mr. Brodrick, in reply to Captain Norton, said there were twenty-seven candidates for the next Army Medical Staff examination.

State of the Indian Army.

Captain Pirie asked the Under Secretary of State for War whether the War Office would be prepared to reconsider the question of long service in India for British troops, as being both physically and financially advantageous, especially in view of the disastrous casualties from enteric fever and venereal disease among British soldiers in India. Mr. Brodrick replied that the application of the short service system to India had been proved to possess many advantages from a physical, financial, and military point of view, and Her Majesty's Government had no intention of reverting to the old system of long service for the Indian Army.

Small-pox Hospital Sites.

Dr. Tanner asked the President of the Local Government Board whether any definite rules now apply in the selection of sites for hospitals for small-pox, and if any evidence was now available to indicate at what distance from people aggregated in institutions or living in dwelling-houses hospitals might be established without risk to persons who were susceptible of small-pox infection.—Mr. Chaplin replied: The inquiry of the hon. member raises an interesting and important question, on which he is probably more competent to express an opinion than I am, but I am advised by the medical experts of the Local Government Board that no definite evidence is as yet available to show what is the distance at which small-pox hospitals may be established from aggregations of persons without risk to such persons, and pending the solution of this question we do not sanction loans for the provision of small-pox hospitals on any site where it would have within a radius of a quarter of a mile either a hospital or a workhouse or any similar establishment, or a population of 150-200 persons, or on a site where it would have within a radius of half a mile a population of 500-600 persons, whether in one or more institutions or in dwelling houses.

The Certification of Lunatics.

Dr. Tanner asked the Chief Secretary to the Lord Lieutenant of Ireland whether, in the case of any dangerous lunatic confined in an asylum, in whose behalf application had been made that he or she should be discharged, having ceased to be insane, such application could not be entertained until it was certified to the Lord-Lieutenant by two physicians or surgeons that the individual had become of sound mind, or it had been certified by the resident medical superintendent or visiting physician that he had ceased to be dangerous, and if in the case of the two former authorities demanding such release any demur on the part of the local medical (asylum) authorities could prevent it.—Mr. Gerald Balfour replied: In the case of a dangerous lunatic committed to a district asylum under the 10th Section of the Act 30 and 31 Vict., Cap. 118, it is not necessary for two physicians or surgeons to certify that the individual has become of sound mind before an application for discharge can be entertained. The discharge of such lunatics is regulated by Section 11 of the Act and by the latter part of Section 10. Section 11 requires the resident medical superintendent or the visiting physician to certify that the person has either become of sound mind or has ceased to be dangerous, while the latter part of Section 10 enables relatives or friends under certain conditions to take the lunatic under their care and protection on entering into sufficient recognisances for his safe keeping. But the Court of Appeal has held that there is no absolute right conferred by this Section, and that it remains optional with the governors of the asylum to so transfer the custody of the lunatic.

MONDAY, JULY 26TH.

The Pollution of the Brent.

Mr. Bartley asked the President of the Local Government Board whether he was aware that the present condition of the River Brent was again in a most dangerous condition to the health of the district and of the western suburbs of London, and that residents who could were leaving their houses in consequence, and that the children in the large central district school, some 1200 in number, which was close to the banks of the River Brent, were in great danger from the foul condition of the stream; whether his attention had been drawn to the correspondence between the Hanwell and other local authorities on the subject; whether anything had been done to protect the population since attention was called to the matter in this House; and whether he would cause immediate steps to be taken to stop the pollution of the river.—Mr. Chaplin replied that he was not aware of the correspondence between the Hanwell and other local authorities referred to, and the only complaint which he had received for many months past as to the condition of the Brent was received on the 20th of the present month from the Wembley Urban District Council alleging pollution of the river by sewage from Willesden district. Since attention was called to the matter in this House, an injunction had been granted to restrain the Willesden Urban District Council from discharging the effluent from their sewage works into the river until it had been properly purified. An injunction had also been obtained against the Wembley District Council. In the case of Willesden the Local Government Board had sanctioned loans amounting to £23,000 for sewerage and sewage disposal and £12,000 for the

purchase of an additional area of fifty-two acres of land for the purification of the sewage. They had also sanctioned a loan of £5000 for the purpose of sewage disposal in the case of the Wembley district. The Middlesex County Council were empowered to enforce the provisions of the Rivers Pollution (Prevention) Act and any action which might be required as regards other districts could be taken by them. The Local Government Board were not empowered to institute proceedings

The Vaccination Commission.

Sir Seymour King asked the President of the Local Government Board whether he had yet ascertained when the remainder of the evidence and special reports on which the final reports of the Royal Commission on Vaccination was based would be published, and what was the cause of delay.—Mr. Chaplin said that Mr. Bret Ince, who acted as secretary to the Commission, informed him on May 12th that the whole of the as yet unpublished evidence referred to would be issued within three weeks of the time, and that the special reports would be issued at the same time, but some of them rather sooner than the evidence. He had since then twice written to Mr. Ince on the subject of the delay, but he regretted to state that as yet he had not received any reply to his last communication, which was dated July 14th, or to the memorandum which was forwarded to him on Saturday, when the notice of this question appeared on the paper.

Inflammable Preparations for the Hair.

Mr. Wootton Isaacson asked the Home Secretary whether his attention had been called to the death by fire, of a lady in a hairdresser's shop, while having her hair dressed with a preparation known as Petrole or dry shampoo; whether he was aware that this dangerous preparation was composed of rectified petroleum and ether, which gave off a vapour which would catch fire from a distant light, or the action of the sun; and whether he would adopt means to put a stop to the sale of these dangerously inflammable preparations.—Sir M. White Ridley replied: Yes, my attention has been called to this accident. I am informed that the inquest has been adjourned for further evidence as to the precise character of the preparation and other matters, and I am unwilling to anticipate the conclusions of the jury by expressing any opinion at present either as to the cause of the accident or as to the necessity which it may show to exist for taking further measures with regard to substances of this character. If, however, it is found, as seems likely, that the preparation was largely composed of petroleum spirit it falls, of course, within the provisions of the Petroleum Acts. I may add that the London County Council, as the local authority under those Acts, are giving careful attention to the subject, and are represented at the inquest. The hon. member is no doubt well aware that the present law with regard to petroleum is in a very unsatisfactory state.

TUESDAY, JULY 27TH.

Calf Lymph.

Mr. Strachey asked the President of the Local Government Board whether a board of guardians might instruct the public vaccinators in their union to give parents the option of having their children vaccinated with calf lymph instead of human lymph.—Mr. T. W. Russell, who replied on behalf of Mr. Chaplin, said that the public vaccinators were not subject to the directions of the boards of guardians in this matter, but they were enabled by the instructions of the Local Government Board to use calf lymph instead of human lymph whenever they so desired.

WEDNESDAY, JULY 28TH.

Infant Life Protection Bill.

At this sitting this Bill as amended by the Grand Committee was considered and was read a third time. It now only awaits the Royal Assent before becoming law.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

AHERNE, J. L., L.K.Q.C.P. Irel., L.R.C.S. Edin., has been appointed Medical Officer for the Gislingham Sanitary District of the Hartismere Union.

ANDERSON, J. A., M.D. Glasg., has been appointed Medical Officer for the Leswalt (Stranraer) Parish Council, vice H. Cochrane.

ATKINS, T. E., L.A.H. Dub., has been appointed a Member of the Licensing Court for the Licensing District of Mitchell, New South Wales.

BLUMFIELD, J., M.D. Cantab., has been appointed Junior Anæsthetist to St. George's Hospital, London.

CLUCKIE, A., M.B., C.M. Glasg., has been appointed Medical Officer for the Stranraer Parish Council.

COLE, S. G., M.B., B.Ch. Oxon., has been appointed Junior Obstetric Officer to St. Mary's Hospital, London.

GREENWOOD, ALFRED, M.B., Ch.B. Vict., L.R.C.P., L.R.C.S. Edin., has been appointed Resident Medical Officer to the Salford Union Infirmary, Manchester.

HUNT, T. H., M.B., B.S. Lond., has been appointed Senior House Surgeon to the Royal Halifax Infirmary, vice J. C. Maxwell, resigned.

KEMPE, C. M., M.R.C.S., has been re-appointed Medical Officer of Health for the Shoreham Urban Sanitary District.

LAWSON, THOMAS, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Resident Medical Officer for the St. Pancras and Northern Dispensary, Euston-road, London.

MCARTHUR, D. C., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 5 Sanitary District of the Hertford Union.

MULLIN, JOHN, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Ruskey Dispensary District, Strokestown Union.

NEIL, JAMES, M.D. Aberd., C.M., has been appointed Medical Superintendent for the Warneford Asylum, Oxford.

PAKES, WALTER C. C., L.R.C.P. Lond., M.R.C.S., D.P.H. Camb., has been re-appointed Assistant Demonstrator of Bacteriology at Guy's Hospital, with the Charge of the Practical Chemistry in the D.P.H. Course.

RICHARDS, J. S., M.D. Lond., B.S., L.R.C.P., M.R.C.S., has been appointed Medical Superintendent of St. Saviour's Infirmary, East Dulwich-grove, S.E., vice H. E. Harris, resigned.

ROSE, H., L.R.C.P. Lond., M.R.C.S., has been appointed House Surgeon to the Buckinghamshire County Hospital, Aylesbury.

SALMON, C. C., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been elected a Member of the Dental Board of Victoria, Australia.

SPRINGTHORPE, J. W., M.D., Ch.B. Melb., M.R.C.P. Lond., has been appointed President of the Dental Board of Victoria, Australia, vice Dr. Turner, resigned.

STORR, F. A., B.A. Oxon., L.S.A., has been appointed Medical Officer of Health by the Halifax Rural District Council.

TAYLOR, J., M.D. Aberd., D.P.H. Camb., has been re-appointed Medical Officer of Health by the Chester-le-Street Rural District Council.

VAUGHAN, ETHEL, M.B., B.S. Lond., has been appointed an Assistant Medical Officer to the Camberwell Infirmary.

WILKINSON, WM. A. HORSLEY, M.B., Ch.B. Vict., has been appointed Medical Officer of Health to the Gainsborough Urban District Council, vice D. Mackinder, resigned.

WILLIAMS, R. T., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health for the Porthcawl Urban Sanitary District.

YOUNGSON, T. McK., M.B., C.M. Aberd., has been appointed Medical Officer of Health by the Wolstanton Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Senior House Surgeon. Salary £80, with board and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and lights provided.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W. — Clinical Assistant.

CHILDREN'S HOSPITAL, Nottingham. House Surgeon (non-resident) for six months. Salary at the rate of £100 per annum.

CORNWALL COUNTY ASYLUM, Bodmin.—Junior Assistant Medical Officer, unmarried. Salary £100 a year, increasing £10 yearly to £120 a year, with board, lodging, &c.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon for one year. Salary £70 per annum, with board, lodging, and washing.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary £100 a year, increasing £10 a year to £120, conditionally, with board, residence, attendance, and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Junior Resident Medical Officer for six months. Salary at the rate of £50 per annum, with board, lodging, and washing.

HUNTINGDON COUNTY HOSPITAL, Huntingdon.—House Surgeon. Salary £50.

LANCASHIRE ASYLUMS BOARD.—Medical Attendant on the Patients for the Idiot Boys' Asylum at Winwick, near Warrington. Inclusive salary 100 guineas per annum. Applications to the Clerk to the Lancashire Asylums Board, County Offices, Preston.

MALDON UNION.—Medical Officer for the St. Peter's Medical Relief District. Salary £80 a year, with midwifery fees of 15s. per case and other extra fees. The Medical Officer will also be appointed Public Vaccinator. Salary and fees subject to deduction under the Poor Law Officers Superannuation Act. Applications to the Clerk to the Board, Maldon, Essex.

MANCHESTER ROYAL INFIRMARY, DISPENSARY, AND LUNATIC HOSPITAL OR ASYLUM.—Honorary Dental Surgeon.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the North-Eastern Fever Hospital, St. Anne's-road, Tottenham, N., unmarried. Salary £160 the first year, £180 the second year, and £200 the third and subsequent years of service, with board, lodging, attendance, and washing, subject to deduction under the Poor-law Officers Superannuation Act, 1896. Applications to the Clerk to the Board, Chief Office, Norfolk-street, Strand, W.C.

PARISH OF BOLESKINE AND ABERTARFF.—Medical Officer for the Fort-Augustus District. Applications to Mr. A. Urquhart, Inspector of Poor, Gorthleck.

POPLAR HOSPITAL FOR ACCIDENTS, Blackwall, E.—Two Assistant House Surgeons for six months. Salary £65 a year, with board and residence.

ROTHERHAM HOSPITAL AND DISPENSARY.—House Surgeon for three years. Salary 100 guineas, with board, lodging, and washing.

ROYAL SURREY COUNTY HOSPITAL, Guildford. — Assistant House Surgeon. Board, residence, and laundry provided.

ST. MARY'S HOSPITAL MEDICAL SCHOOL, Paddington, London.—Demonstrator of Anatomy.

STOCKPORT INFIRMARY.—House Surgeon. Salary £100 a year, with board, washing, and residence. Also Junior Assistant House Surgeon for six months. Honorarium at the rate of £24 per annum, with residence, board, and washing.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £120 a year, increasing £5 annually to £130, with furnished rooms, coal, and gas, and an allowance of £25 for travelling expenses.

Births, Marriages, and Deaths.

BIRTHS.

BARRACLOUGH.—On July 24th, at London-road, South Lowestoft, the wife of Harold C. Barraclough, M.B., of a son.

CHAPMAN.—On July 20th, at St. John-street, Hereford, the wife of Paul Morgan Chapman, M.D., F.R.C.P., of a son.

GARDINER.—On July 26th, at Portland-terrace, Richmond, Surrey, the wife of M. H. Gardiner, M.B., L.R.C.P., L.R.C.S. Edin., of a son.

LAWSON.—On July 25th, at Fortune's Well, Portland, Dorset, the wife of David James Lawson, M.D., of a son.

NORTON.—On July 26th, at Kennington-park-road, S.E., the wife of H. Harvey Norton, L.R.C.P., M.R.C.S., of a daughter.

SHUTE.—On July 22nd, at Granby-place, Northfleet, the wife of G. S. Shute, M.D., of a son.

THOMPSON.—On July 23rd, at Grenville House, Quay, Bideford, N. Devon, the wife of Charles Sinclair Thompson, M.B Edin., of a son.

MARRIAGES.

BOND—YELD.—On July 22nd, at St. Mary Abbott's, Kensington, William Ernest Bond, M.R.C.S. Eng., L.R.C.P. Lond., of Bramhall, Cheshire, to Emily Hollier Yeld (Millie), younger daughter of the late W. Walter Yeld, of Churchgate House, Stockport.

CRICKMAY—ROSSER.—On July 22nd, at St. John's Church, Croydon, by the Rev. William Henry, M.A., Vicar of Challock, Kent, godfather of the bride, assisted by the Rev. T. G. Hill, M.A., Colin Lindsay, youngest son of George R. Crickmay, F.R.I.B.A., of Putney and Westminster Chambers, to Edith Lizzie, only child of Walter Rosser, M.D., of Croydon.

CURREY—BINNY.—On July 24th, at St. Peter and St. Paul's, Aldeburgh, E. F. N. Currey, M.R.C.S. Eng., L.R.C.P. Lond., eldest son of the late J. E. Currey, M.D., of Lismore, Co. Waterford, Ireland, to Constance Murray, fourth daughter of Major-General Binny, B.S.C. (Retired), of Crespigny, Aldeburgh, Suffolk.

DUCAT—JACKSON.—On July 17th, at St. Mary's, Spring-grove, Isleworth, Arthur David Ducat, M.B. Lond., of Chiswick, to Helen Mellora, eldest son of Walter H. E. Jackson, C.C., of Derby House, Spring-grove, Isleworth.

GIBSON—WATT.—On July 26th, at St. John's-wood Presbyterian Church, Marlborough-place, Henry W. Gibson, M.B., to Jane Grant, eldest daughter of A. P. Watt, 29, Abbey-road, N.W.

GLOVER—GLOVER.—On July 22nd, at Union Chapel, Islington, by the Rev. Richard Glover, D.D., of Bristol, and the Rev. W. Hardy Harwood, of Islington, Lewis G. Glover, M.A., M.D. Cantab., of 1, College-terrace, Hampstead, youngest son of John Glover, J.P., of Highgate, to Mary Mildred, only daughter of James Grey Glover, M.D., J.P., of Highbury.

NEWTON—HARBORD.—On July 22nd, at Slaugham Church, Sussex, Reginald Frederick Henry Newton, M.R.C.S., L.R.C.P., of Balcombe, Sussex, to Susanna Booth, fourth daughter of the late William Harbord, Surgeon, Walnfleet All Saints, Lincolnshire.

STRAND—PETTER.—On July 21st, at St. Michael's, Blackheath-park, Alick Condell Strand, M.R.C.S., L.R.C.P., L.D.S., Hinckley, to Edith, eldest daughter of Arthur Petter, Eskdale Lodge, Blackheath, S.E.

TOWNE—NEWNHAM.—On July 27th, at Lady Grey, Allival North, South Africa, by the Rev. W. Rossiter, Rector of St. Paul's, Allival North, Hugh Rose Forster Towne, M.R.C.S., L.R.C.P. Lond., younger son of the Rev. L. B. Towne, Vicar of St. John the Baptist, Harlow, to Ethel Agnes, second daughter of Dr. Lewis J. Newnham, of Lady Grey.

WILSON—NAYLOR.—On July 21st, at Cairo, Williams Hawkins Wilson, M.B. Oxon, Professor of Physiology, Medical College, Cairo, to Kate Hamilton, youngest daughter of J. R. Naylor, C.S.I., Indian Civil Service (Retired), of Cadbury House, Yatton, Somerset.

DEATHS.

BLACK.—On July 19th, suddenly, at 95, Goldhawk-road, London, W., John Frank Black, M.B., C.M., aged 51 years.

BULLOCK.—On July 21st, suddenly, Thomas Warren Bullock, M.R.C.S., L.S.A., of Overtown House, Isleworth, aged 37 years.

HOLMAN.—On July 18th, at his residence, Niton, Isle of Wight, Charles Henry Holman, M.R.C.S., aged 75 years.

OAKES.—On June 14th, 1897, in his 27th year, George Nelson Davidge Oakes, L.R.C.S.I. and L.R.C.P.I., of 28, Leeson-park-terrace, Leeson-park, Dublin, accidentally drowned while bathing at Menaos, N. Brazil, while in Medical Charge of the s.s. *Sobraleuse*, Red Cross Line, to the intense grief of his afflicted mother, relatives, and many kind, sorrowing friends: only son of the late John Oakes, Esq., Lieutenant, Deputy-Assistant-Superintendent of Stores. (By cablegram, June 19th.)

ROBERTS.—On July 24th, at Uxbridge-place, Carnarvon, Watkin William Roberts, F.R.C.S., J.P., in his 79th year.

THOMPSON.—On July 22nd, at Welbeck-street, London, Henry Thompson, M.D., Senior Fellow of St. John's College, Cambridge, F.R.C.P., aged 81 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 29th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp. Shade.	Min Temp	Rainfall.	Remarks at 8.30 a.m.
July 23	30·10	N.W.	66	59	127	82	56	...	Cloudy
,, 24	30·10	S.E.	71	66	130	85	64	...	Hazy
,, 25	29·93	W.	72	63	125	79	65	0·04	Fine
,, 26	29·89	W.	66	60	121	73	60	0·12	Cloudy
,, 27	29·84	N.W.	61	59	119	74	57	...	Cloudy
,, 28	30·02	N.W.	66	60	97	73	59	...	Cloudy
,, 29	30·22	W.	68	64	85	72	63	...	Cloudy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. I. of 1897, which was completed with the issue of June 26th, was given in THE LANCET of July 3rd. It is intended, in future, to include the Index and Title-page for each past half-yearly volume in the first number of the succeeding volume, as in the present case, instead of in the last number of the volume itself, as heretofore.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

PRESERVATION OF DEAD BODIES.

ACCORDING to Dr. Kraindel (*Vrach*, No. 27, 1897) a very efficient method of preserving bodies for anatomical and other purposes is to inject into the vessels a 5 per cent. solution of formalin to the extent of a quarter or even a third of the weight of the body. From experiments made on the body of a child, and on a head and foot, he came to the conclusion that a temperature of 80° F. has no effect on bodies so treated—at all events for six or seven weeks. The cadaveric discolouration and all smell disappeared as soon as the liquid had been introduced, and the external appearance became that of a body recently dead. Experiments made with a stronger solution—10 per cent.—showed that this causes decided external change, the skin having a shrivelled appearance and becoming slate-coloured in less than three weeks.

WHAT'S SAUCE FOR THE GOOSE, &c.

AT the recent election of an assistant physician to the Carlisle Infirmary the rules of the institution were read, and the attention of the new member of the staff was specially directed to a statute preventing union appointments or clubs being held by the honorary staff, to which reasonable ordinance he was asked to subscribe. A correspondent who should be well informed tells us that an assistant surgeon also elected recently holds club appointments, and he asks: "Is this fair?" If the facts are as he has stated them, undoubtedly the position is not fair at all, and we recommend the assistant surgeon to resign his club appointments, if he have any, so as to bring himself into line with his medical *confrère*.

M.B., C.M.—The duties of a workhouse medical officer are set forth very fully in Article 205 of the General Consolidated Order of the Poor Law Commissioners, dated July 24th, 1847. There have been some minor amending orders issued by the Local Government Board since then, but practically this General Order gives full particulars and has all the authority of a statute. The duties of master, matron, and nurse are set forth in the same Order, and the duties of the first two named were somewhat modified by a General Order of the Local Government Board, dated Feb. 12th, 1879, and by supplementary Orders at other times. The standard text-book on the subject, which we commend to the notice of our correspondent, is "Glen's Poor-law Orders" (Knight and Co.), costing about 25*s*. The General Orders can be obtained separately from Messrs. Eyre and Spottiswoode, East Harding-street, London. As regards the duties of nurse, it is with much regret we record that no material modification has been made in her duties since the Order of 1847, although times have changed so much in this department of human enterprise. However, we understand that the Local Government Board have at the present moment under consideration a new Order dealing with the question of workhouse nursing.

THE PATHOLOGY OF DISTEMPER.

To the Editors of THE LANCET.

SIRS,—The pathology of distemper in the dog has been neglected, I suppose, by the veterinary surgeons, as the disease is very prevalent and claims a great number of very valuable dogs by death. I have hunted in vain to find if any micro-organism is described, and have also consulted some local veterinary surgeons. Klein in his latest work does not describe 'distemper at all. I should define distemper as an acute inflammatory, contagious disorder, affecting chiefly the respiratory passages, sometimes the alimentary tracts, and very frequently leaving as a sequela some nervous affection (chorea and paralysis and fits), rheumatism, and rickets. Distemper in the dog, I think, is only a stage in the life-history of the organisms of scarlet fever and diphtheria, for these reasons scarlet fever is followed by rheumatism and dropsy and chorea in the human being. So it is in the dog with distemper. Diphtheria is frequently followed by paralysis. So also is distemper in the dog. In the dog the paralysis is chiefly in the hind limbs, but I have seen the throat also affected. As regards treatment in these animals, perchloride of iron gives very good results. Antitoxin injected gives excellent results also, the nasal mucous membrane is cleared of its discharge in twenty-four hours, and should there be a white film over the eyes this also disappears. But for this film calomel dusted into the eyes has given me excellent results.

Vaccination between the ears has also given me good results. The other part of the treatment I follow is a stimulating plan—plenty of raw meat-juice, eggs and milk, and port wine and brandy—and hygienic. The sequelæ of distemper are almost incurable—viz., chorea and paralysis. I write this short letter so that some of our bacteriologists may take up this subject and see if there is any connexion between these diseases pathologically, as they coincide clinically. I believe there is. Most of my experiments with antitoxin and vaccination have been done on high-bred dogs—i.e., in-bred to bring out their fine qualities. Mongrels do not suffer so severely as in-bred ones.

I am, Sirs, yours truly,

Ashton-under-Lyne, June 14th, 1897. F. W. MANN, M.B.Edin.

*** Were distemper due to the microbe of scarlet fever would not our correspondent expect the latter disease to be specially rife among veterinary surgeons, the attendants at kennels, &c.? But we have yet to learn that such is the case. Diphtheria, on the other hand, is due to a perfectly well-known bacillus, which during the past twelve years has been carefully studied by Löffler, Roux, Yersin, and others, but which has never, so far as we are aware, been shown capable of producing symptoms even remotely resembling those of distemper. Further than this, Friedberger and Fröhner (two very eminent German veterinary authors) absolutely deny that any case of human diphtheria has been shown to have arisen from animal infection, or that human diphtheria can be transmitted (as a specific disease) to animals. The micro-organism of distemper has not yet been definitely identified, though our correspondent is quite in error in supposing that the veterinary profession has neglected to study the disease. On the contrary, it has given it very close attention. Millais identified six varieties of organism with nasal discharge, one of which was a bacterium and the other five cocci. Of these one resembles very closely the pneumococcus of Friedländer, and is regarded by Millais as the *causa causans*, on account of its occurring in the blood of every animal examined. By growing mixed cultures on gelatin (transplanting to new tubes six or seven times) a material was produced which could be employed as vaccine. It sufficed to smear a small quantity of such a culture on the nose of a well-bred dog to bring about a mild and uncomplicated attack of distemper, after which the animal enjoyed an immunity similar to that which follows disease contracted in the usual way. Rabe (of the Hanover Veterinary School) found small cocci, sometimes in chains, sometimes aggregated in twos or fours (sarcinæ), in the nasal discharge and blood. They stained readily with methyl-violet. Friedberger confirmed this. Mathis discovered a diplococcus which, after cultivation, reproduced the disease in dogs. Schantyr recently published a report of experiments. He divides distemper into three forms—viz., an abdominal "typhus" type, distemper proper, and canine "typhoid." The "typhus" bacilli are small, short bacilli closely resembling those of human typhus. They occur in the blood and internal organs. The true distemper bacilli are small, slightly bent organisms, and the "typhoid" bacilli are very small, straight rods, usually aggregated together in groups.—ED. L.

TRENCH'S REMEDY.

WE have received a curious little pamphlet issued by Mr. J. Townsend Trench. This gentleman is the son of the late Stewart Trench, who wrote "Realities of Irish Life"—a very delightful book. The present Mr. Trench is a many-sided genius—land agent, lay preacher, magistrate, unqualified practitioner, and a crack shot like his father, who had the reputation of being sure of a crow on a bush at forty yards. We do not quite understand Mr. Trench's attitude. He advertises all his remedies—some twenty-eight in number—and apparently goes about the country prescribing gratis, and yet he says: "Never hesitate to consult your local doctor. He has the advantage of seeing you on the spot. Never for a moment let me stand between the patient and what is believed to be his or her best interest. The doctors are my best friends, and I cannot speak too highly of them and their noble profession." The "epilepsy remedy" which appears to be Mr. Trench's sheet anchor is, we fancy, a very ordinary bromide mixture; but, as Mr. Trench so truly remarks, "In some cases I find Folly harder to cure than Fits," and a much advertised and bepuffed remedy with testimonials from the clergy and ministers of all denominations will always be popular.

Dr. A. Arany (Hungary).—There is no legal obstacle to anyone practising in England with any or no qualification at all, but such person cannot sign a death certificate or sue for fees. To have any rights he must be possessed of a registrable qualification, and register such at the office of the General Medical Council. A Hungarian diploma is not registrable in this country, but the Conjoint Examining Board admits gentlemen, possessed of qualifications entitling them to practise in their own country and given after a course of study and examination equivalent to that prescribed by the Board, to the examinations for the conjoint diploma under special conditions. For further particulars we advise our correspondent to apply to the secretary of the Conjoint Board, Examination Hall, Victoria Embankment, London.

THE DROWNING FATALITIES.

WAR has been defined as an epidemic of wounds and injuries, and this particular season of the year is usually marked by its little recurring epidemic of drowning. That is only to be expected, perhaps, during the bathing and boating season; but it is seldom that so many separate cases of drowning have occurred in a short time as have recently been chronicled in the daily papers. Most of these cases have arisen under circumstances that did not admit of being foreseen in any way and provided against by the presence of a boat—a precaution commonly taken where a number of people are daily bathing at a seaside place; and one of the sad features on the present occasion has been the number of those who have been drowned whilst endeavouring to succour and save others from that fate. Drowning people proverbially catch at a straw, and a panic-stricken victim instinctively clutches at the nearest part—the head and neck, for instance—of anyone attempting his rescue. It requires much coolness and some practised skill on the part of a swimmer going to the aid of a drowning person to safely and successfully accomplish his object.

A NOVEL DEFENCE FOR MILK ADULTERATION.

A CHESHIRE farmer, named Jeffs, of Lower Hall, Manley, Frodsham, was summoned last week to the Manchester Police Court for selling adulterated milk, and fined £10 and costs on two summonses. Milk taken at the central station was found to contain 18 per cent. of added water, and the other sample, taken at the farm, 10 per cent. Two inspectors visited the farm for the purpose of taking a sample of milk from the cows. The cows were brought up from the field, and shortly before four milking-cans were placed in the shippon. During the milking defendant's wife entered the shippon from a door other than that which she had been using; she carried a bucket and began milking. The inspector, suspecting that something was wrong, looked into the bucket and found it contained several quarts of water. When spoken to Mrs. Jeffs said she had not noticed the water in the bucket. The explanation, however, given by the solicitor for the defence was that to the water in the bucket it was intended to add a little milk and then give it to a foal. Mr. Headlam, the stipendiary magistrate, described the case as rather a bad one, and inflicted the penalties as stated above.

Dental Surgeon.—A properly qualified medical man can practice as a dental surgeon and can describe himself as such without the necessity of being a L.D.S. or being on the Dentists' Register. Such a medical man would not be considered by other dentists as a dental quack.

"THE PATHOGENESIS OF GOUT."

To the Editors of THE LANCET.

SIRS,—It is perhaps worth noting that Dr. C. Mordhorst, in THE LANCET of July 17th, urges us to give sodium chloride to gouty patients to avoid deposits of phosphates, and that Surgeon-Captain H. E. Roberts, in THE LANCET of Dec 26th, 1896, stated that stone prevailed in India in proportion as the natives ate less salt.

I am, Sirs, yours truly,
July 17th, 1897. W. E. HOME.

E. W.—The plan would only be of avail where the insomnia was the result of a noisy environment. This form of insomnia is quite unimportant, and may generally be obviated by altering the surroundings, and also tends to cure itself as the sufferer gets accustomed to the trouble.

ATTEMPTED PARRICIDE BY A MEDICAL STUDENT.

A FRENCH newspaper, *Le Temps*, reports an extraordinary case of attempted parricide which was recently adjudicated by the Court of Assize of Meurthe-et-Moselle. In December last a medical student, named Fernand Boullet, perpetrated a furious assault on his father, who is a respected magistrate of the Meuse living at Nayves, first firing several shots from a revolver at almost point-blank range, and then beating him savagely with the butt end of the weapon. The unfortunate victim nevertheless survived the outrage, although all the bullets took effect more or less, and one of them has not yet been extracted. The would-be murderer's motive for his terrible crime was totally inadequate, being merely a desire to make his mother a widow and thus escape three years' military service. The medical staff of the lunatic asylum at Maréville, where the accused was sent for observation, came to the conclusion that his "responsibility was almost integral," or in other words that he was not insane. While the trial was in progress he sobbed almost unceasingly, declaring that he had no recollection whatever of the tragic occurrence, and twice he was convulsed by violent hysterical paroxysms. The President of the Court, who apparently was convinced of his guilt, reminded him that two months' prior to his last crime the whole of his family except himself had nearly died after partaking of an omelette to which strychnine had been added. "It was you who were guilty of this wholesale poisoning, was it not?" said the judge, but Boullet indignantly repelled the charge. The jury brought in a verdict of guilty with extenuating circumstances, and the miserable young man, who was just on the point of embarking on an honourable career, was condemned to ten years' penal servitude.

THE NATIONAL ASSOCIATION OF MEDICAL HERBALISTS.

THE thirty-third annual conference of this body was held on July 22nd at Nottingham. It would appear that it possesses a Council which has drawn up a new form of curriculum, which the President said might be considered too severe, but they must remember that the standard of knowledge was very different from that of forty years ago. When a person acted illegally he was always referred to as a "herbalist," and he did not think this right, for they spent years in study. They ought to be legally recognised. If the medical herbalists want recognition we advise them to add to their studies those of anatomy, physiology, and medicine, then if they pass due examinations they will be recognised.

A HARD CASE.

To the Editors of THE LANCET.

SIRS,—Would any readers of THE LANCET advise me as to the best mode of helping a medical man? He is destitute of friends and relations, aged fifty-four years, and suffers from cataract in both eyes, one of which has been operated on, but without success. He is therefore almost blind, and is unable to carry on his profession. He has no income of any sort, and if help cannot be obtained there is nothing left but the workhouse for him. I am, Sirs, yours faithfully,
July 21st, 1897. H. C.

ERRATUM.—In Dr. Mordhorst's article on the Pathogenesis of Gout, published in THE LANCET of July 17th, the bottled mineral water referred to was erroneously called "Wiesbaden water." The words should have been *Wiesbaden gout water*, which was the term employed in the original MS.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (7th).—Royal Free (9 A.M. and 2 P.M.), Middlesex, (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

During the week marked copies of the following newspapers have been received:—*Hull Daily News, Lincoln Echo, Kentish Gazette, Eastern Morning News, Southampton Observer, Torquay Times, East End News, Huddersfield Chronicle, Glasgow Herald, Pioneer Mail, Times of India, Birmingham Gazette, Dundee Courier, Leicester Post, Builder, Leamington Chronicle, Worcester Echo, Manchester Guardian, Lancashire Daily Post, Architect, Southern Times, South Wales Daily News, Walsall Free Press, Liverpool Daily Post, Western Times, East Anglian Times, Newcastle Journal, North Wilts Herald, Leeds Mercury, Bournemouth Directory, Kidderminster Shuttle, Bradford Observer, Shrewsbury Chronicle, Western Morning News, Scotsman, Bristol Mercury, Wolverhampton Chronicle, Nuneaton Observer, Westminster Gazette, Yorkshire Post, Staffordshire Chronicle, Sussex Daily News, Daily Nation (Dublin), Sanitary Record, Weekly Free Press and Aberdeen Herald, City Press, Hertfordshire Mercury, St. Mary's Hospital Gazette, Local Government Chronicle, St. Thomas's Hospital Gazette, Reading Mercury, Mining Journal, Local Government Journal, Surrey Advertiser, Yorkshire Herald, Tunbridge Wells Advertiser, North Bucks Times, Nottingham Daily Guardian, Evening News (Glasgow), Citizen (Gloucester), Middlesex County Times, Family Herald and Weekly Star (Montreal), Australasian Medical Gazette, Ross-shire Journal, Penrith Observer, &c., &c.*

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F.—Dr. P. C. Fenwick, Christchurch, N.Z.; Messrs. E. Fischel and Co., Lond.; Mr. H. Frowde, Lond.; Messrs. Fannin and Co., Dublin.

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Y.—Dr. J. Young, Kirkcaldy.

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Y.—Dr. Young, Midsomer-Norton.

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